Enterprise Solutions Success Stories and Lessons Learned

Enterprise Solutions Module 4

Tuesday, 27 Jun

Learning Objectives

- Understand the current state and trends of the ERP Market
- Understand changing technology for Enterprise Solutions
  - Service-Oriented Architecture
  - Oracle Fusion
  - SAP NetWeaver
- Provide Success Stories and Lessons Learned for Public and Private Sector ERP implementations
- Open discussion of DoD and Army strategies for ERP implementations

Agenda

Trends in ERP Market	Mr. Larry Wright
Changing Technology	Mr. Larry Wright
SAP and Oracle Strategies	Dr. Ray Sommer
Success Stories & Lessons Learned	Ms. Bel Leong-Hong, Ms. Susan Carter
Break	20 min
Success Stories & Lessons Learned	Mr. William Howell
Success Stories & Lesson Learned	Ms. Sue Schreitmeuller
DoD and Army ERP Implementations	Mr. Lee Harvey
Wrap up & Q&A	Mr. Chip Raymond

Trends in the ERP Market

TBD - Capgemini

Top 10 Reasons ERP Implementations Succeed

1. **Governance** – A structured program enables senior leadership visibility and accountability.
2. **Scope** – An end-to-end Enterprise Process view of business processes leads to a more accurate understanding of the scope of work required to meet organizational requirements.
3. **Change Management** – Sufficient investment in CM activities, -- the people side of change.
4. **Skills** – Implementation team is provided with adequate training on ERP software, project software tools and the System Integrator ERP Methodology.
5. **Decision Making** – Rapid decision-making instead of consensus decision-making.
6. **Communication** – Frequent communication targeted to all levels.
7. **Solution Architecture** – Creation of an COTS/ERP solution architecture and use of appropriate implementation methodology.
8. **Training** – Sufficient investment in project team and user training and executive education.
9. **Culture** – Designated personnel act as change agents who understand the cultural changes which will occur due to the ERP implementation.
10. **Leadership** – Project leadership continuity and consistent feedback.

Technology doesn't deliver transformation – People do…

ERP Market Insights

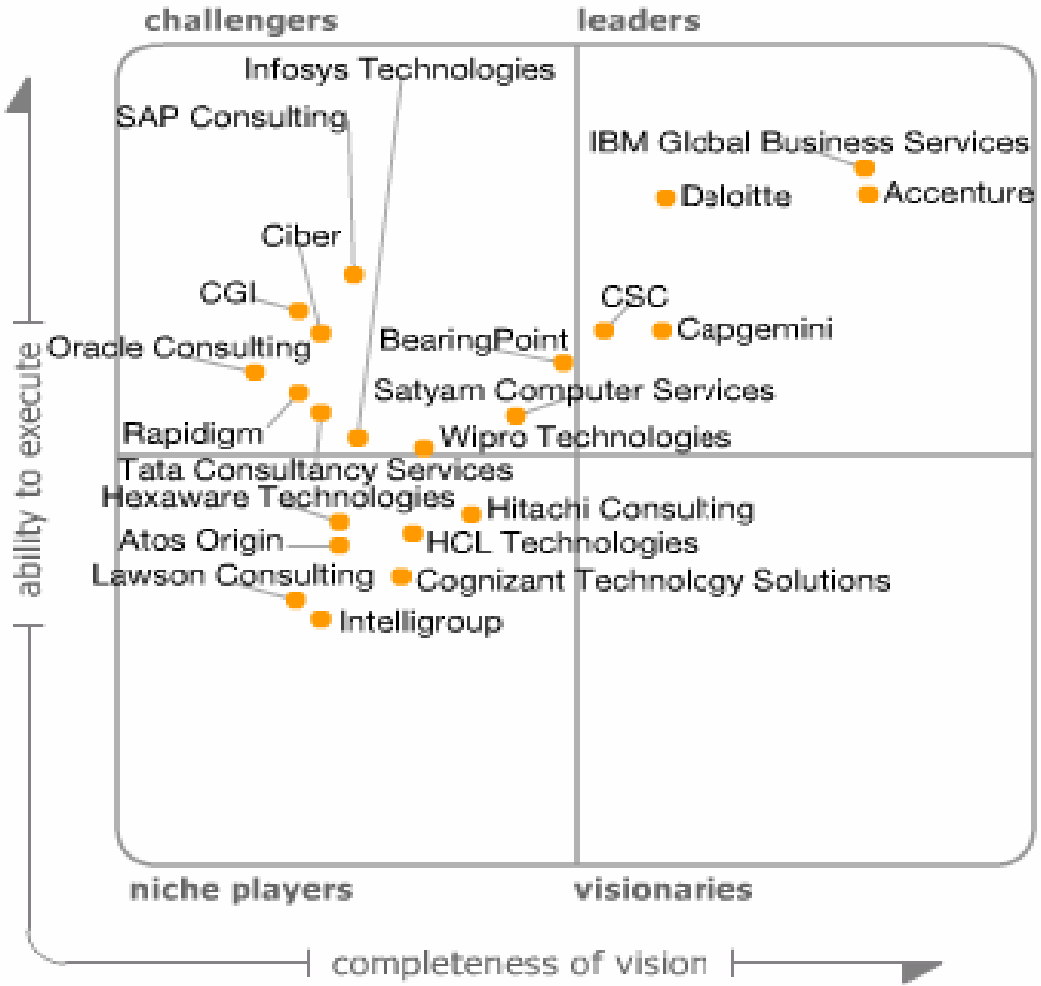
- Top 2 players (SAP, Oracle) own more than 60% of the market
  - Oracle acquired PeopleSoft, JDEdwards & Seibel
- To sustain customer base, vendors are extending maintenance and support for older or acquired products
  - Market awaiting more information on Oracle's approach to integrate PeopleSoft and on SAP's direction with NetWeaver and Microsoft
- Architectural changes
  - ERP vendors are migrating towards a service-oriented architecture (SOA)
    - Oracle – Fusion (COMING)
    - SAP – NetWeaver (HERE)

ERP Vendors (by mkt share)

1) SAP
2) Oracle

ERP Service Providers

Gartner Magic Quadrant for North America, 2006



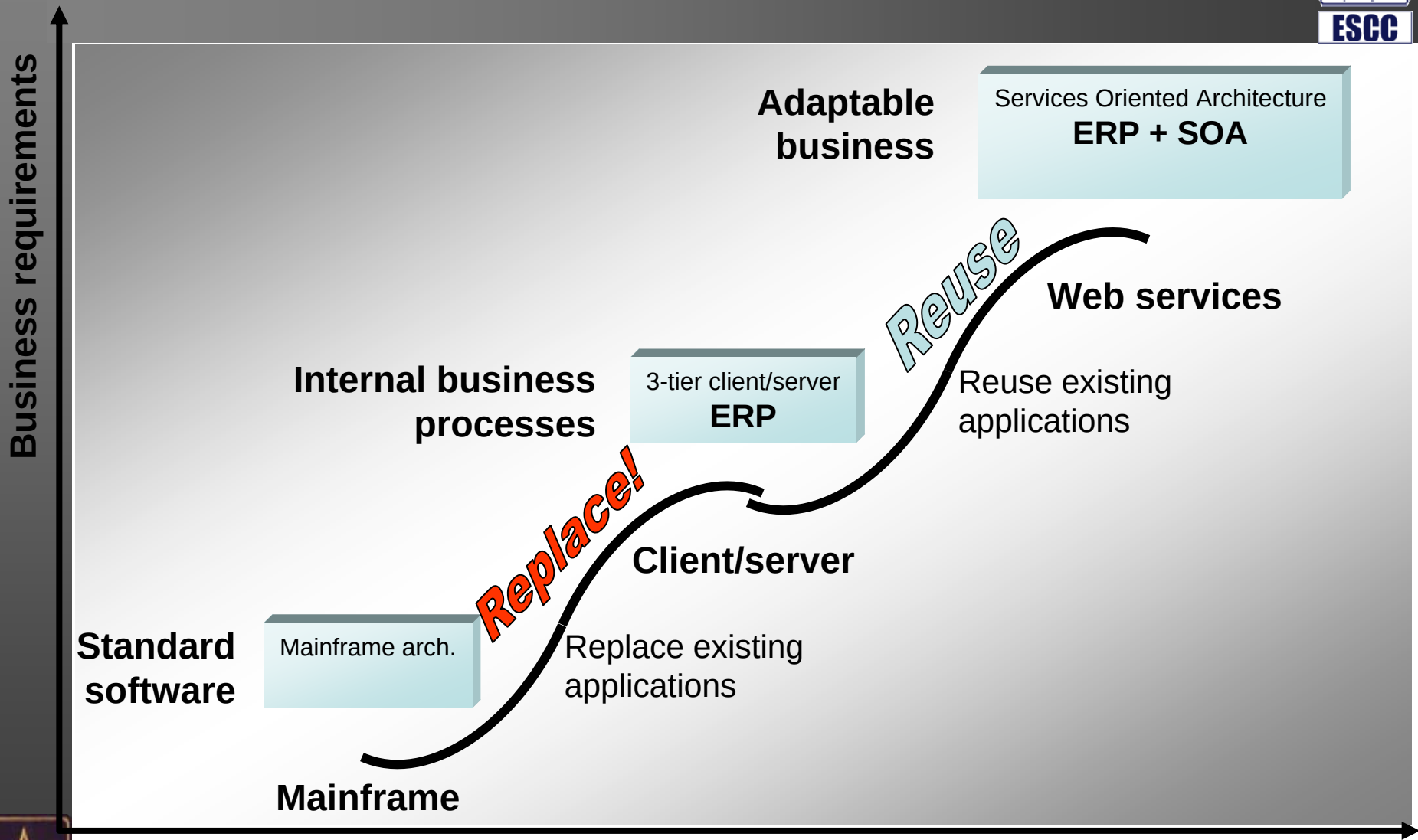
As of May 2006

Source: Gartner (May 2006)

DoD
Enterprise Software Initiative
Blanket Purchase Agreement
(ESI BPA)
Systems Integrators

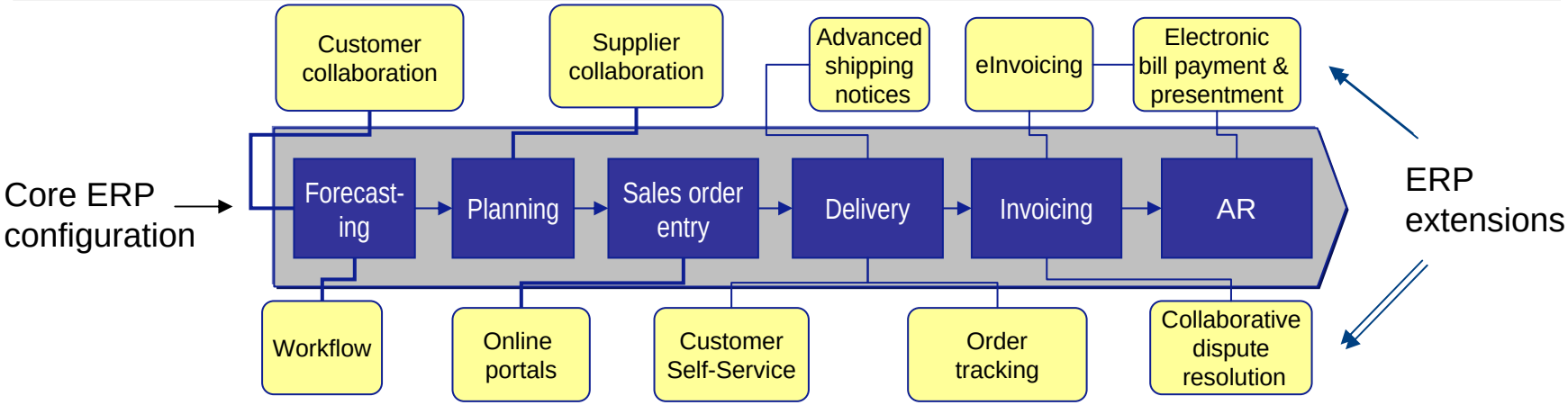
1) Accenture
2) BearingPoint
3) CSC
4) Deloitte
5) IBM

Next Bold Move in ERP



Implement Business Processes Holistically

SOA changes the way business processes are designed and implemented. If addressed correctly, the additional cost can be minimized

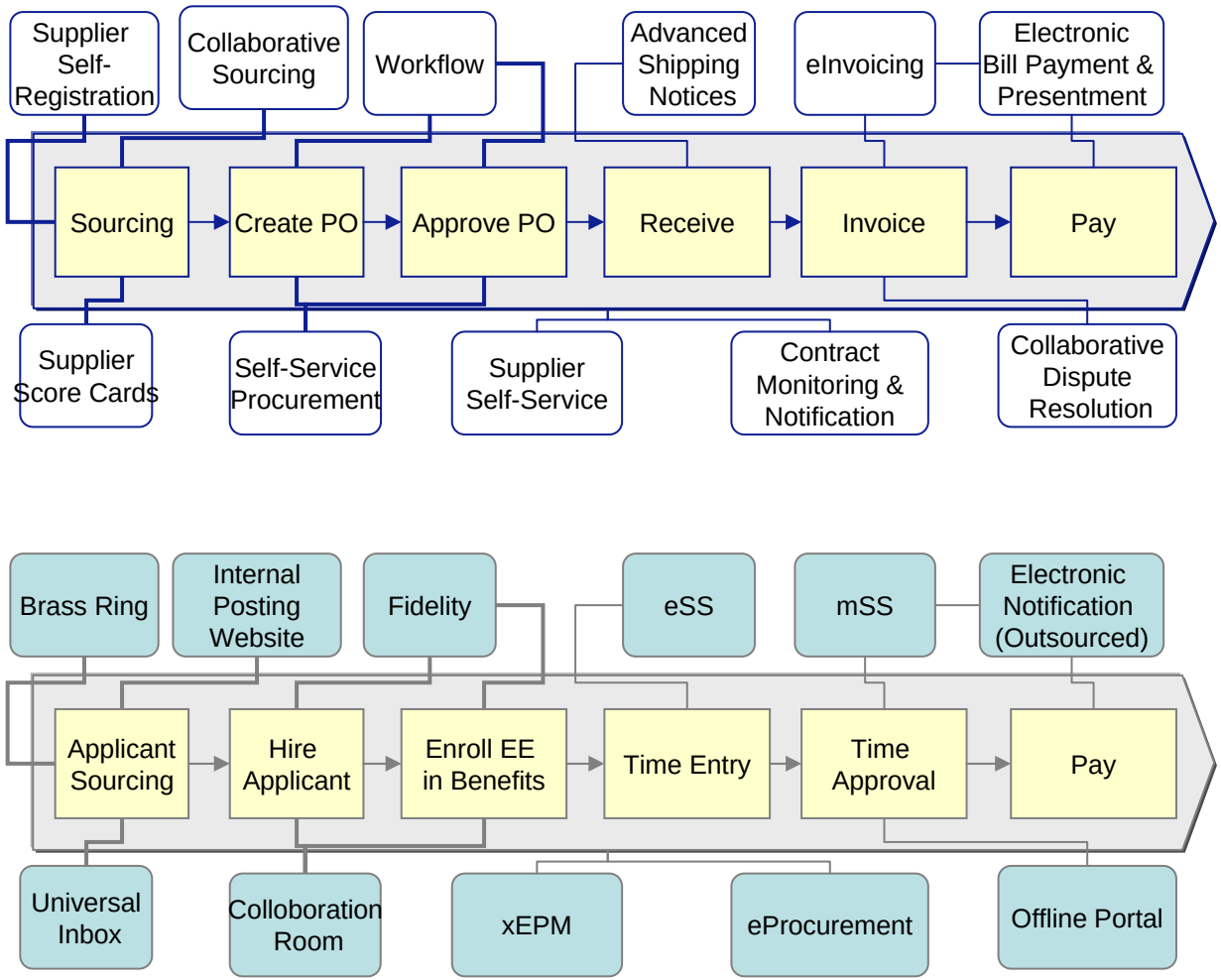


SOA enables all aspects of a business process to be implemented, not just what can be configured within the ERP application

Key benefits:

- High-quality, end-to-end business solution for both internal and external users
- Reduces errors, rework, and simplifies the monitoring and execution of financial processes
- Fully supports the collaborative and non-transactional aspects of the financial process
- Financial process navigation is independent of the underlying business applications
- Personalized solution. Users only see what is relevant to them

Modern ERP changes the way business processes are designed and deployed



Increase intimacy, interaction, and integration

- **Business process improvements/ re-engineering**
- **Create a more collaborative, personal working relationship with customers, suppliers, business partners**
- **Increased level of self-service and collaboration**
- **Tighter, more cost-effective integration**

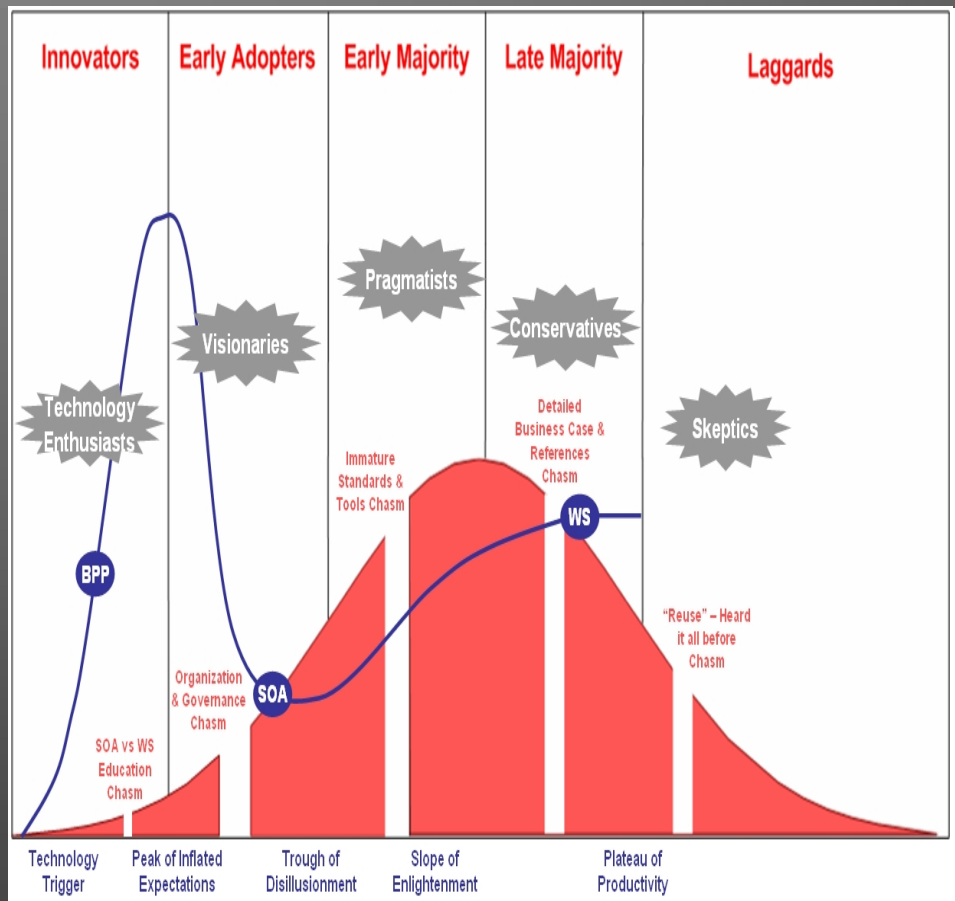
Agenda

Trends in ERP Market	Mr. Larry Wright
Changing Technology	Mr. Larry Wright
SAP and Oracle Strategies	Dr. Ray Sommer
Success Stories & Lessons Learned	Ms. Bel Leong-Hong, Ms. Susan Carter
Break	20 min
Success Stories & Lessons Learned	Mr. William Howell
Success Stories & Lesson Learned	Ms. Sue Schreitmeuller
DoD and Army ERP Implementations	Mr. Lee Harvey
Wrap up & Q&A	Mr. Chip Raymond

Service-Oriented Architecture

Larry Wright - Capgemini

The Evolution of SOA

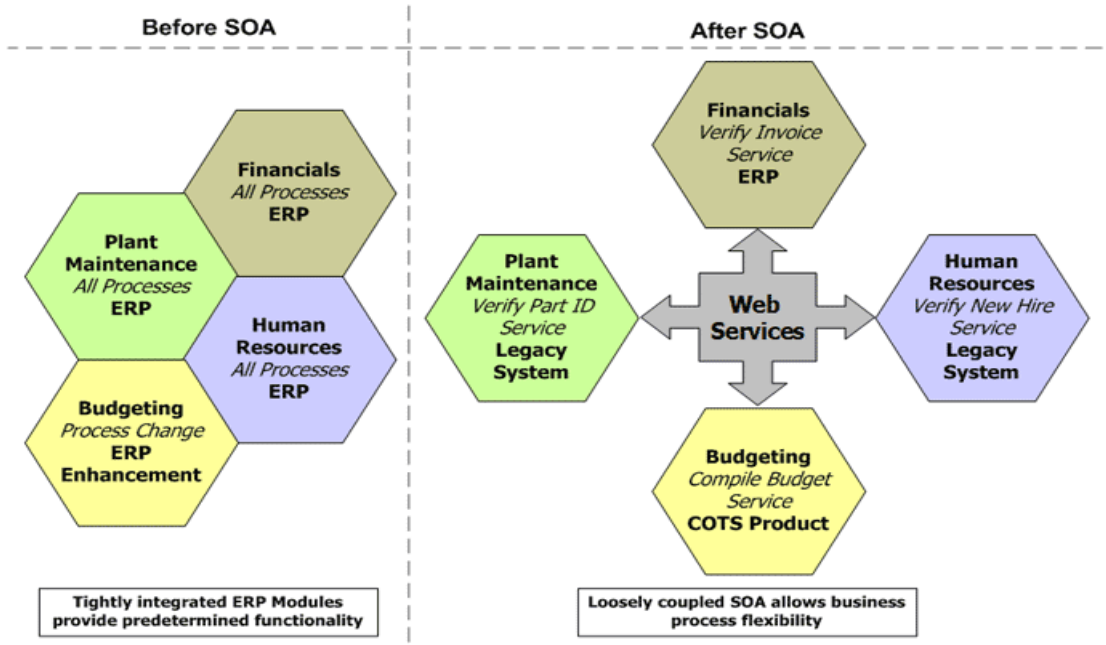


- The blue curve represents Gartner's "hype cycle" which graphically represents the maturity, adoption and business application of specific technologies/paradigms.
- In July 2005 Gartner stated that the use of web services is approaching the "Plateau of Productivity". This can be attributed to some key web services standards being published and being made available in a plethora of tools and products.
- Gartner states that SOA is approaching the "Trough of Disillusionment". Gartner thinks that SOA has been hyped beyond new technologies/paradigms.

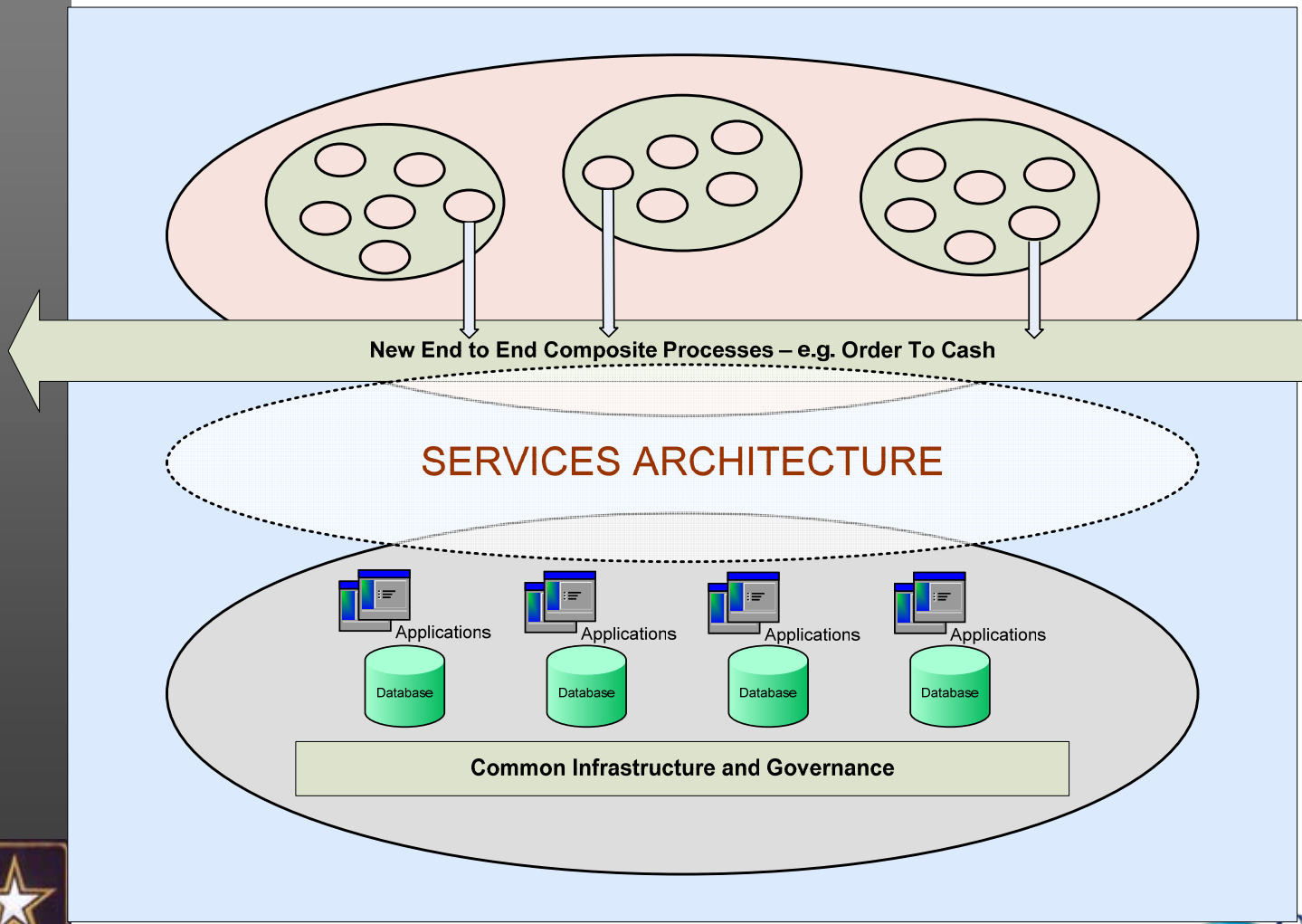
SOA is a maturing paradigm which promises to allow more direct interoperability of business processes. Web services, a key enabler of SOA, has proven it's benefits in the market.

What is a Service-Oriented Architecture?

- A Service is based on a function-oriented (business process) view of an enterprise that is well-defined, self-contained, and doesn't depend on the context or state of other services.
  - A service consists of an interface and a service implementation component
    - The interface component facilitates interoperability
    - The implementation component produces results based on the application logic associated with the business process



The Linkage: Services Architecture(s) = Business + IT



Business Strategy

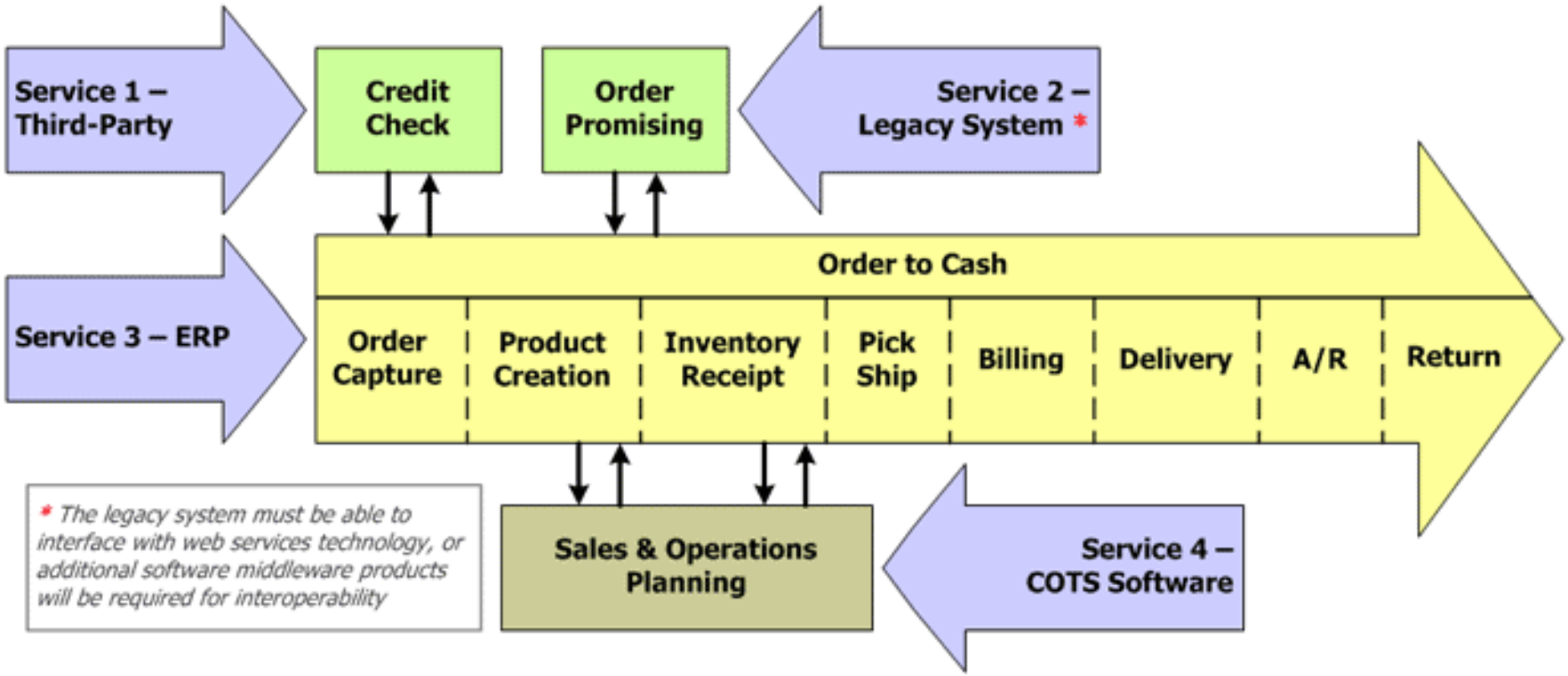
Integrated view of business services buit on optimised processes within business units

IT Strategy

Enterprise level architecture to support improved quality of service to the business with consolidated and shared infrastructure reducing TCO

Why Service-Oriented Architecture?

- Flexibility is the key benefit of a SOA approach
  - If software applications are built using SOA standards, then any business processes rendered as a collection of services can be combined to create an enterprise business process solution.



What is a Service-Oriented Architecture?

- A Service-Oriented Architecture (SOA) is:
  - A software design approach in which a software application requests one or more services from another software application which provides complementary services.
  - A collection of services that communicate via a high-level interoperability layer and are based upon existing and emerging Web Service standards.
  - Internal or external business processes that can be combined and recombined to support flexibility in business process execution.
  - Depending on the need, applications initiate a “service request” or respond to a “service request”.

- A Service-Oriented Architecture:
  - Enables business transformation by providing visibility of enterprise-level business processes
  - Forces IT executives to think in terms of business process execution
  - Helps emphasizes “code reuse” and thus enables a greater ROI
  - Minimizes the impact of changes to software code on other software components

When to use SOA

- If your enterprise includes multiple stovepipes and legacy systems that have no means of communicating with each other. (If these systems happen to be based upon web services technology, then interoperability is possible without additional middleware).
- If there is no economic value in building or buying an alternative solution.
- If you want to decrease your dependency on vendor-specific software products and still use multiple software service components.
- If you are trying to maximize your ability to create flexible business processes and support cross-functional enterprise views.

When to use SOA

- Business Processes vary, hence they need to be handled differently:
  - Transactional Processes – Not good SOA candidates because large transaction volumes are burdensome to technical infrastructure

    Example: Processing payroll garnishments
  - Verification Processes – Good SOA Candidates

    Example: Verifying vendor unique ID codes
  - Management Processes – Good SOA Candidates

    Example: Updating security profiles

Current State of SOA

- Three web services standards form the foundation of SOA development:
  - SOAP – An XML-based specification for defining how Web services exchange messages.
  - WSDL – An XML-based taxonomy for defining the characteristics and functionality of a web service.
  - UDDI – Provides a central repository which lists web services that are available, akin to an address book.
- These standards continue to mature and have been used inconsistently by vendors.
- The DoD continues to review these standards due to security and authorization deficiencies which are currently inconsistent with GIG requirements.

SOA Standards in the DoD

- **DISR**: Department of Defense Information Technology Standards Registry. DISR contains all of the approved and active technical standards to be used by DoD components. It replaces the Joint Technical Architecture (JTA).
  - Standards have 1 of 3 states:
    - Emerging
    - Mandated
    - Inactive/Retired
- Some commercial SOA standards have not been included in the DISR.
  - If project teams require the use of SOA standards not yet in the DISR, a waiver must be obtained from DISR to implement new standards.

Standard	DISR Status
SOAP	Mandated
WSDL	Mandated
UDDI	Mandated
WSS_Core	Mandated
WSRP	Mandated
JSR168	Mandated
WebDav	Mandated
WS-BPEL	None
WS-Policy	None

Agenda

Trends in ERP Market	Mr. Larry Wright
Changing Technology	Mr. Larry Wright
SAP and Oracle Strategies	Dr. Ray Sommer
Success Stories & Lessons Learned	Ms. Bel Leong-Hong, Ms. Susan Carter
Break	20 min
Success Stories & Lessons Learned	Mr. William Howell
Success Stories & Lesson Learned	Ms. Sue Schreitmeuller
DoD and Army ERP Implementations	Mr. Lee Harvey
Wrap up & Q&A	Mr. Chip Raymond

SAP and Oracle Strategies

Dr. Ray Sommer – Enterprise Integration, Inc.

The Paths to SOA

- There is more than one way to move your organization toward a Service-Oriented Architecture.
  - Implementing a SOA-ready ERP System and exploiting its SOA engine to extend business processes enterprise-wide.
  - Implementing a “Middleware” solution and utilizing its ability to compose services to orchestrate less compatible applications.

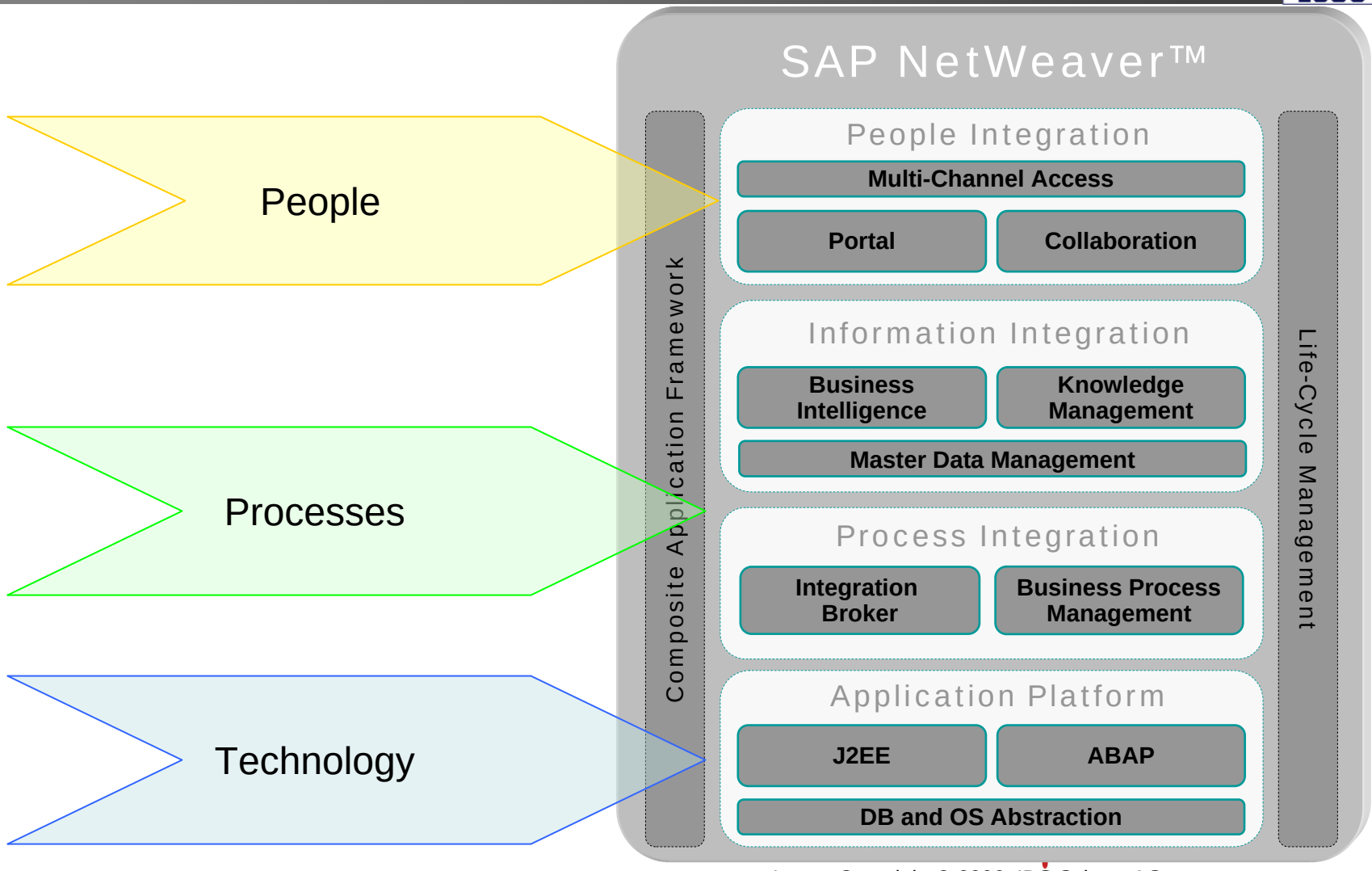
Neither of these approaches is necessarily “better” – it depends on what your objectives are.

The ERP Path to SOA

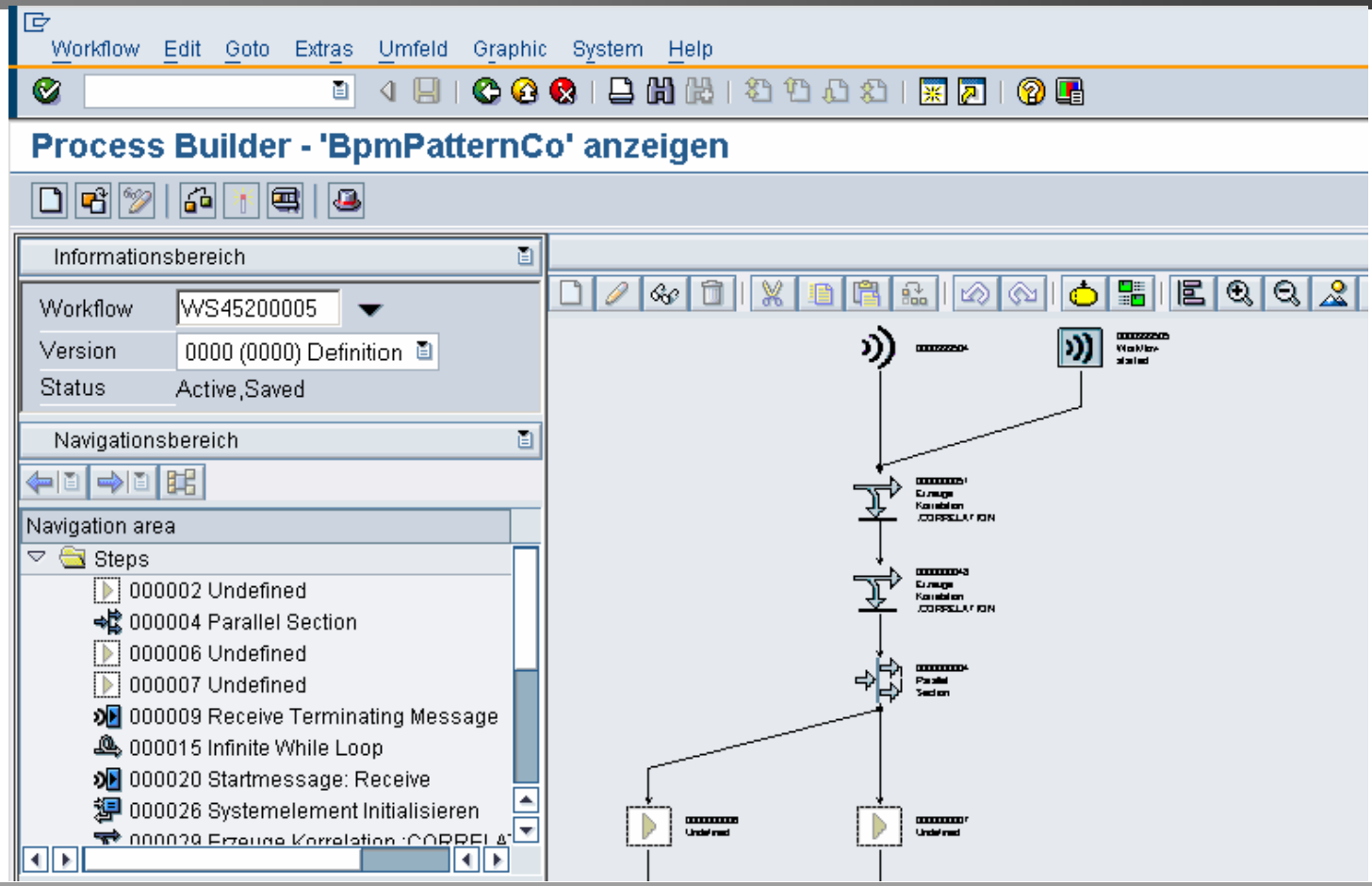
- The market-leading ERP vendors have incorporated SOA-enabling technology into their products.

ERP Vendor	SOA-enabling Technology
SAP	NetWeaver
ORACLE	Fusion

SAP's NetWeaver Technology



Process Orchestration in SAP's NetWeaver



Enterprise-wide processes can be orchestrated within NetWeaver's "Composite Application Framework."

Master Data Management

- SAP's Master Data Management is a component of the NetWeaver technology that promises to provide a method to manage data quality from within SAP.

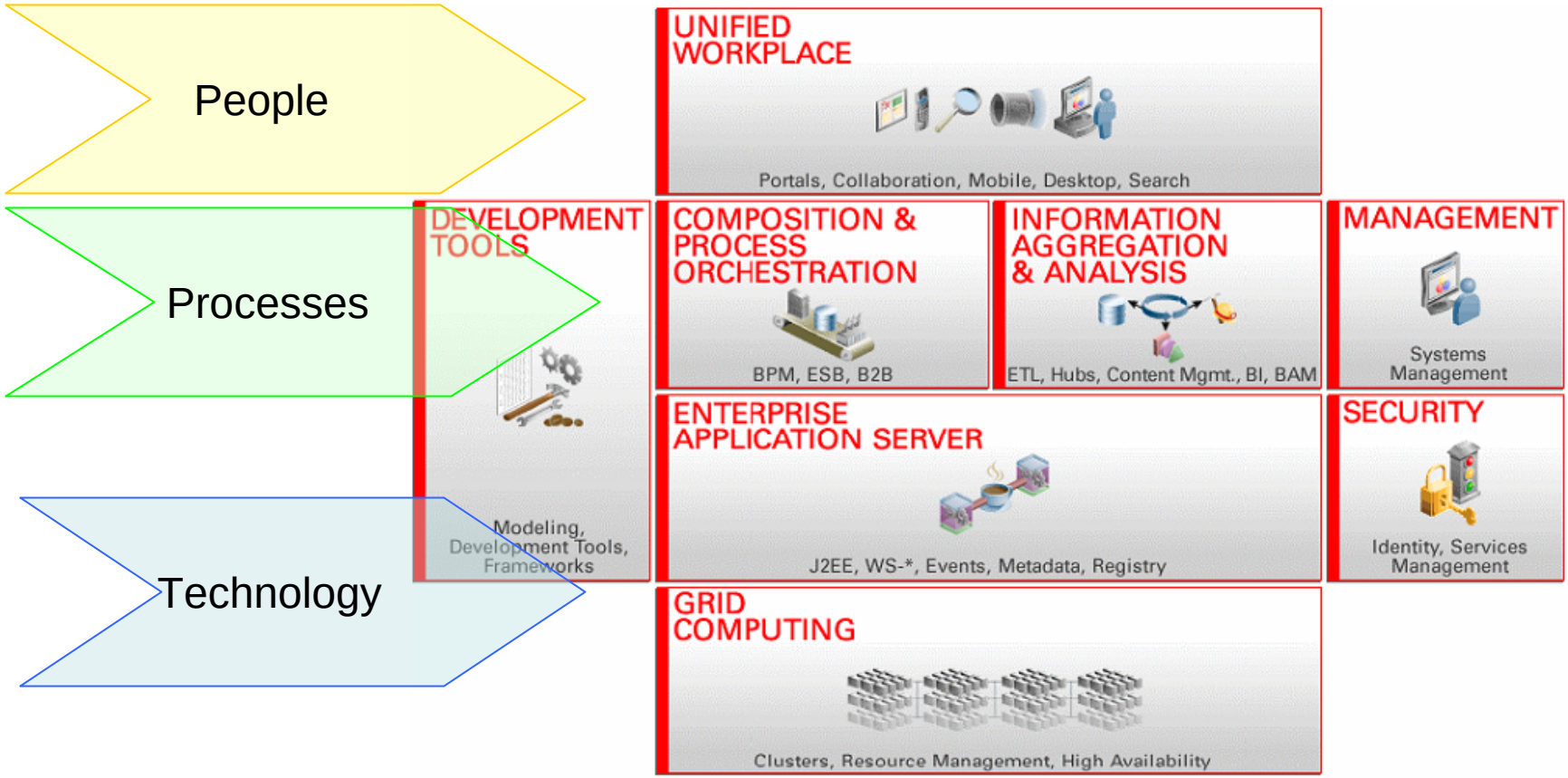
- It advertises the following capabilities:
  - Technology – ETL (Extract Transform Load)
    - Removes data from one system and puts them into another
    - Tracking data changes and distributing to subscribing systems
    - Keeping historical audit trail
  - Business Process – Workflow
    - Managing new master data creation requests
    - Ensuring Data Management roles are managed (e.g. who is allowed to change what data objects)
  - Managing Data Changes and Exceptions – Portal / GUI
    - Legacy systems may need MDM GUI to manage manual changes

The ERP Path to SOA

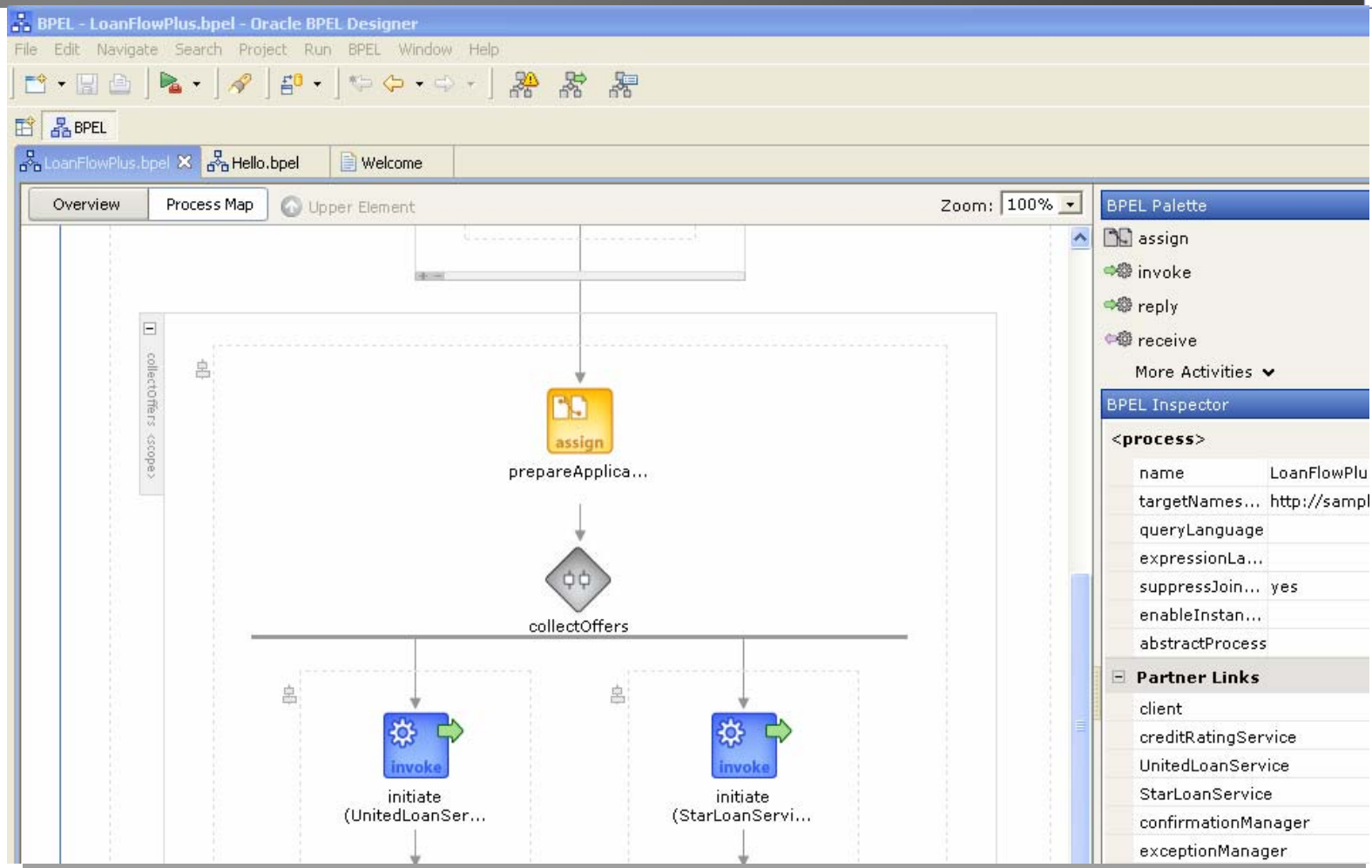
- The market-leading ERP vendors have incorporated SOA-enabling technology into their products.

ERP Vendor	SOA-enabling Technology
SAP	NetWeaver
ORACLE	Fusion

Oracle's Fusion Technology

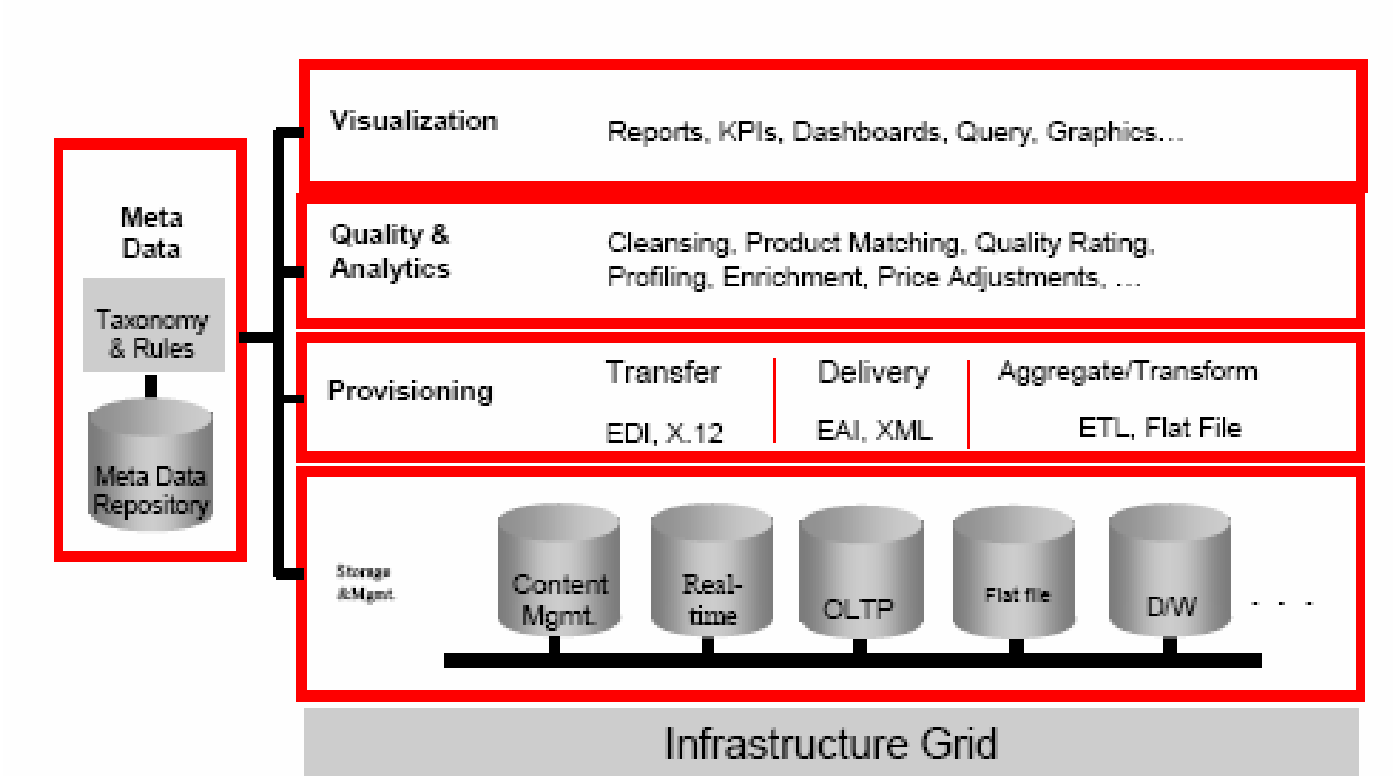


Process Orchestration in Oracle's Fusion



Enterprise-wide processes can be orchestrated within Oracle's Fusion.

Oracle's Enterprise Information Architecture



Limitations of ERP as SOA Approach

- EPR products such as SAP's Netweaver & Oracle's Fusion do not contain any full enterprise service repository content for other applications that may exist in an organization.

- Middleware solutions may be required to enable non-web standard-compliant legacy applications to provide and request "services".

Currently ERPs vendors supplement tightly integrated end-to-end business processes with limited SOA functionality.

The Middleware Path to SOA

- Middleware vendors offer suites of technology to create business process interoperability between non-web compliant systems.

Middleware Vendor	SOA-enabling Technology
bea Think liquid.™	AquaLogic
IBM®	WebSphere

Limitations of Middleware as a SOA Approach

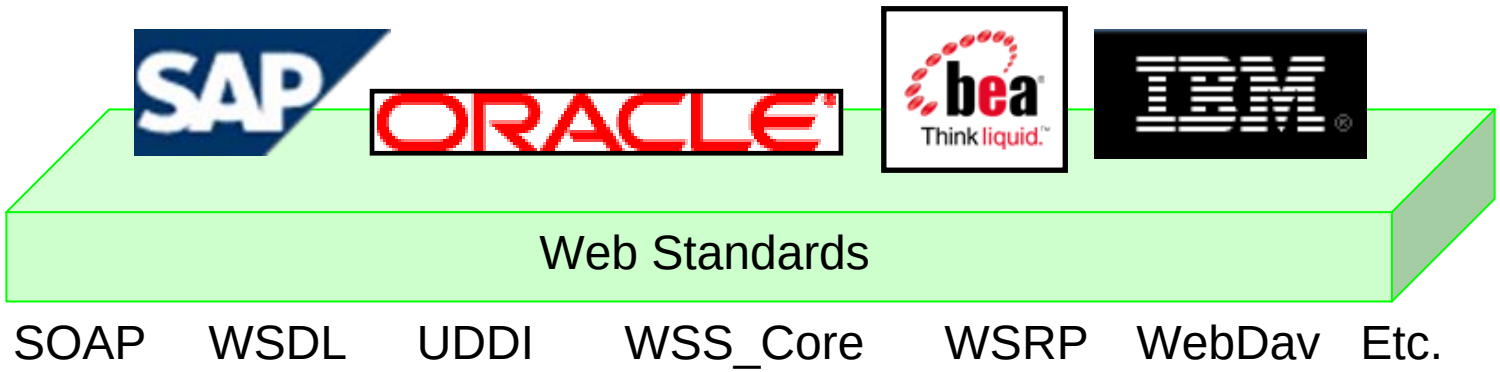
- Middleware vendors' products such as BEA's Aqualogic & IBM's WebSphere do not contain the intrinsic business process logic found in ERP software applications. Therefore, they can only support the integration of end-to-end processes

- Middleware is best suited for integration of processes which validate information not transactional information or processing large volumes of data

Middleware is very robust at composing your SOA, but it does not contain native business processes, so it can not get you all the way there.

Web Standards Enable SOA

- All of these SOA approaches are made possible because the products comply with the published web-service standards.



In order to orchestrate an existing legacy application into your SOA it must be either already web-service compliant or you must develop the "encapsulation" yourself.

Agenda

Trends in ERP Market	Mr. Larry Wright
Changing Technology	Mr. Larry Wright
SAP and Oracle Strategies	Dr. Ray Sommer
Success Stories & Lessons Learned	Ms. Bel Leong-Hong, Ms. Susan Carter
Break	20 min
Success Stories & Lessons Learned	Mr. William Howell
Success Stories & Lesson Learned	Ms. Sue Schreitmeuller
DoD and Army ERP Implementations	Mr. Lee Harvey
Wrap up & Q&A	Mr. Chip Raymond

Enterprise Solutions
Success Stories and Lessons Learned

Commercial Success Stories/Lessons Learned
Guest Speakers:
Bel Leong-Hong, Knowledge Advantage, Incorporated
Susan Carter, Data Blueprint

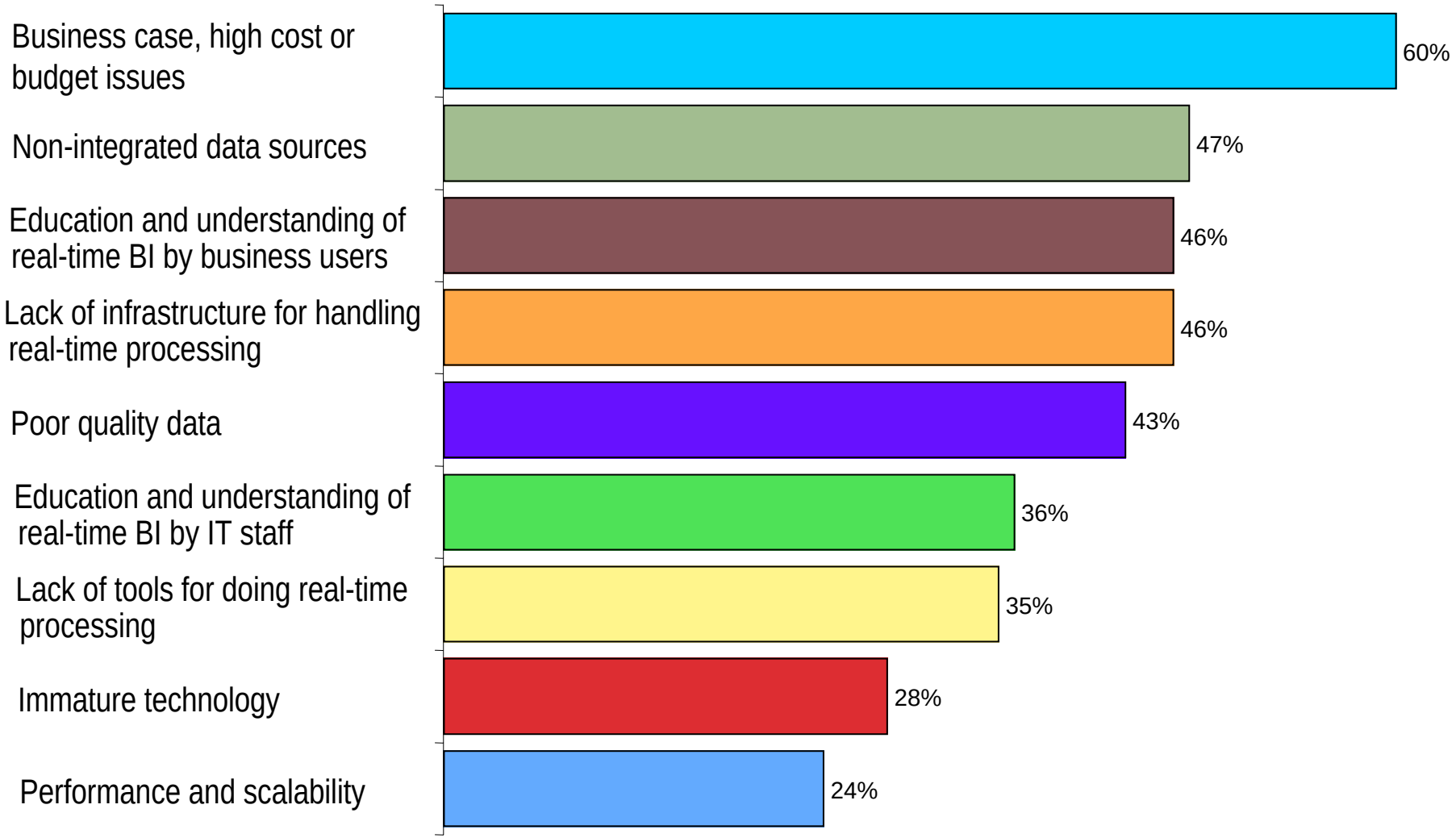
ESCC Enterprise Solutions Course Agenda

Data Quality and Data Migration Lessons Learned

Data Quality & Migrations

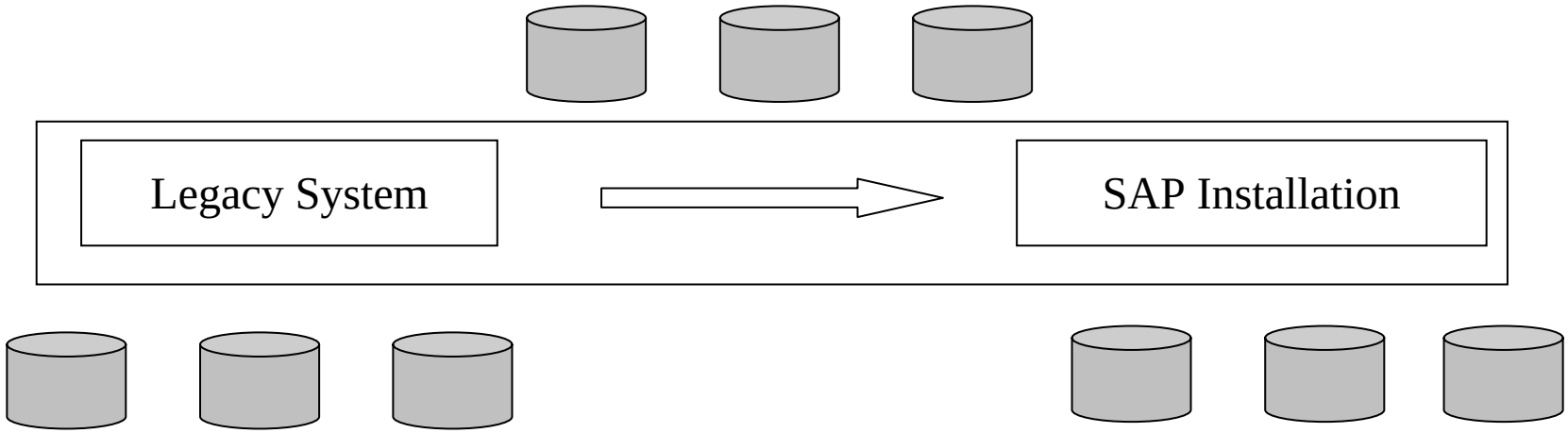
- Lessons Learned
  - Obstacles & Real-Time Lessons from Deployment
  - Project Description
  - Strategy Lessons Learned
  - Implementation Challenges
    - Data Auditing
    - Data Cleansing
    - Data Migration
    - Data Error Prevention
  - Summary Lessons Learned
- Data Quality and Migration Best Practices

Obstacles & Real-Time Lessons from Deployment



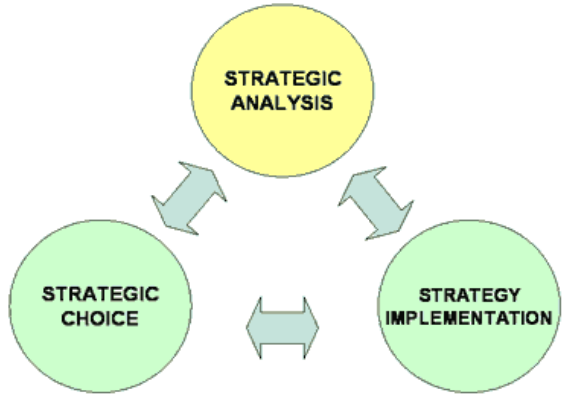
TDWI *The Real Time Enterprise Report*, 2003

Project Description



- Large implementation & migration
- Legacy to SAP
- Procurement focus
- ~ 8M primary records (with numerous related records for each in supporting data)
- Multiple disparate centers/users
- Large integrator with turn-key approach
- Integrator not responsible for data quality

Strategy Lessons Learned



- Data migration should be separate from integration
- Should start data migration planning at beginning of project and run in parallel
- Executive buy-in on data migration strategy essential
- Processes and Plans should be created with a business focus versus an IT focus
- Be wary of ‘sameness’ assumptions
- Investigate gathering intelligence from embedded text field – especially where validation is based upon embedded text
- Resourcing for data quality must be addressed
- Project data evolution must be planned and anticipated

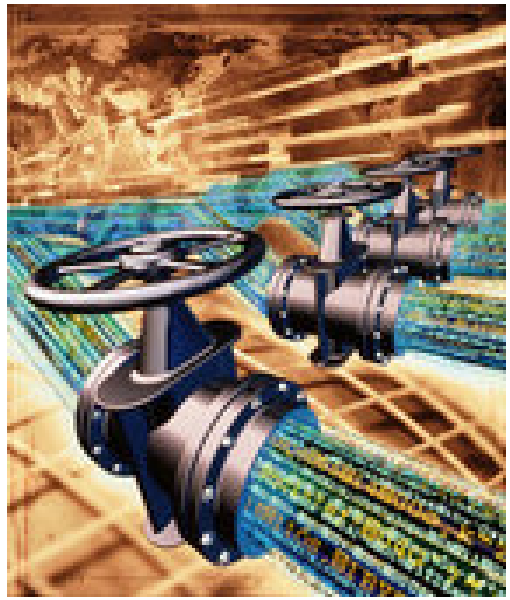
Implementation Challenges

- **Data Audit:**
  - Project Task: Key baseline step to overall success
  - Planning: Timing & Completeness
  - Ownership: Stewardship
  - Processes: Centralized vs. Decentralized
  - Management: Should be owned and managed in parallel but separately from overall project

- **Data Cleansing:**
  - Planning: Stewardship, Validation, Methodology (e.g., manual, automated), Enforcement
  - Time: Plan for and understand the risks of manual vs. semi-automated vs. automated processes
  - Management: Priority order for cleansing imperative (active, cost, volume, necessity, etc.)
  - Prevention: 'Once & Done' approach without enforcement or validation = failure

Implementation Challenges (cont.)

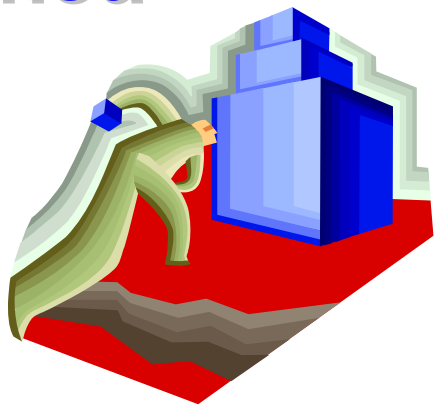
- **Data Migration:**
  - Ownership: Customer/User, Data Quality, Integrator, Data Migrator
  - Planning:
    - Be aware of 'sameness' in processes and data risks
    - Business rules depth
    - Understanding value of data in fields (i.e. embedded text, calculated fields)
    - Resourcing
    - Project data evolution
  - ETL Use: Evaluate packaged ETL versus heavily modified ERP
  - Data Superiority: Uber data assumptions must be verified
  - Focus: Process vs. training
  - Sustainable Quality Data: Built in validation, accommodations for 'dirty' data that must be moved; if migrating dirty data - must create risk, contingency, cleansing plans



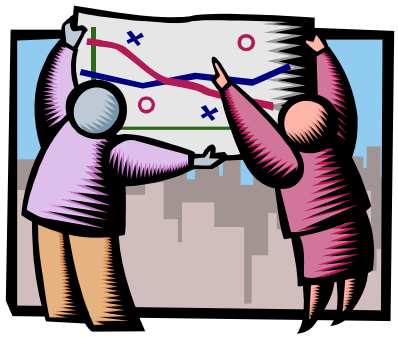
- **Data Error Prevention:**
  - Planning: Must have enforcement of procedures (written or automated)
  - Continuing Errors: New system validation, especially when turned off due to dirty migration, must match new requirements
  - Potential Future Productivity Loss: Without proper prevention and planning may need to continually manually cleanse data
  - Must plan for continuing audit (adhoc, scheduled, automated)

Summary Lessons Learned

Separate & Manage

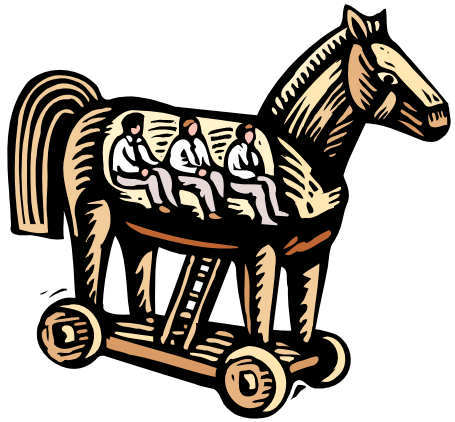


Plan Early



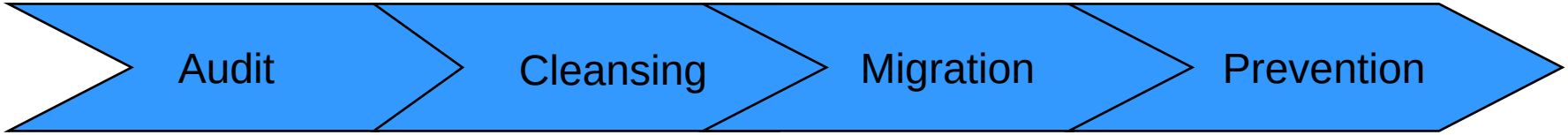
Test, Test, Test

Prevent Future Errors



Data Quality and Migration Best Practices

"Data Quality & Migration must be a separate project with separate resources and accountability to ensure success."



	Audit	Cleansing	Migration	Prevention
Strategy	**Identify/Validate:** •Business Goals, Processes, Rules •Cleanliness Factors, Confidence Levels •Determine Presentation Types	**Identify/Validate:** •Risks, Tolerances, Priorities, Changes, Heuristics •Methods of Cleansing •Access Methods	**Identify/Validate:** •To-Be Environment •Data Move Order •Evaluate ETL Requirements •Test and Migration Plans	**Identify/Validate:** •Confidence, Priorities, Method by error/data types •Design Test Plan and Reassessment Plan
Execution	**Perform:** •Design by process, data structure, overall •Customize, Test and Run Audit Programs •Evaluate results	**Perform:** •Design by error/data type •Customize, Test and Run Cleansing Programs •Evaluate results •Re-run audit	**Perform:** •Design by error/data type •Customize, Test and Run ETL and Migration Programs •Evaluate results •Re-run audit •Test, Test,Test	**Perform:** •Design by error/data type •Customize, Test and Run Code •Enact Reassessment Plan

Project/Program focused for a typical data migration

[new systems (ERP/SOA), Modifications to existing systems, or cleansing]

Agenda

Trends in ERP Market	Mr. TBD
Changing Technology	Mr. Larry Wright
SAP and Oracle Strategies	Dr. Ray Sommer
Success Stories & Lessons Learned	Ms. Bel Leong-Hong, Ms. Susan Carter
Break	20 min
Success Stories & Lessons Learned	Mr. William Howell
Success Stories & Lesson Learned	Ms. Sue Schreitmeuller
DoD and Army ERP Implementations	Mr. Lee Harvey
Wrap up & Q&A	Mr. Chip Raymond

Agenda

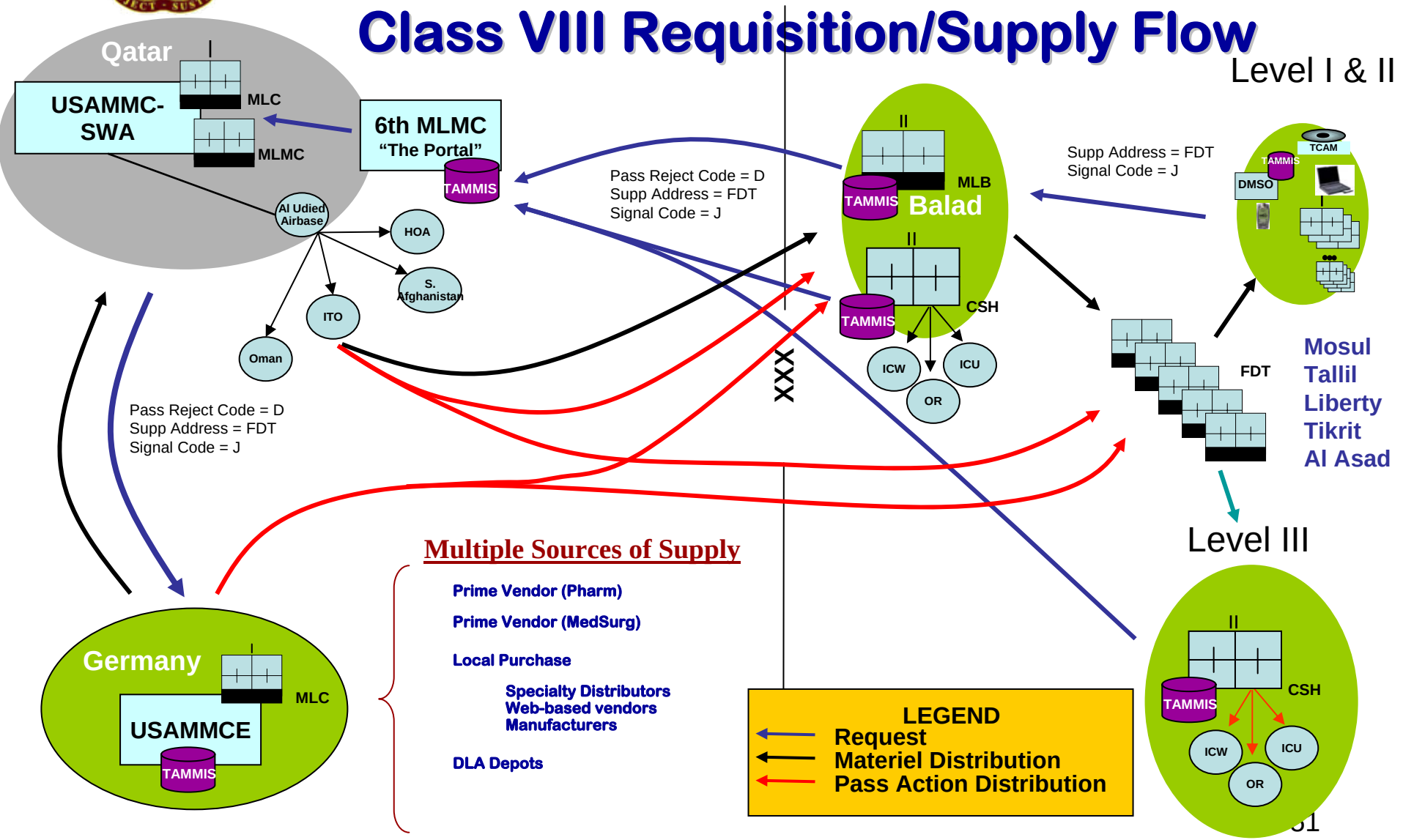
Trends in ERP Market	Mr. Larry Wright
Changing Technology	Mr. Larry Wright
SAP and Oracle Strategies	Dr. Ray Sommer
Success Stories & Lessons Learned	Ms. Bel Leong-Hong, Ms. Susan Carter
Break	20 min
Success Stories & Lessons Learned	Mr. William Howell
Success Stories & Lesson Learned	Ms. Sue Schreitmeuller
DoD and Army ERP Implementations	Mr. Lee Harvey
Wrap up & Q&A	Mr. Chip Raymond

Theater Enterprise-Wide Logistics System (TEWLS)

Update to Enterprise Solutions Executive Course

William H. Howell
Principal Assistant for Acquisition
27 June 2006

Class VIII Requisition/Supply Flow



USAMMA Revolution in Logistics

- SAP product with IBM as the integrator
- Implemented 2001
- SAP R/3 with plug-ins for mat'l mgmt, financials, etc.
- Completed organizational reorganization to build business support office (competency center)
- Incorporated DLA changes into scope (Prime vendor contracts)

Results: Drastically reduced cost and leadtime for assemblies

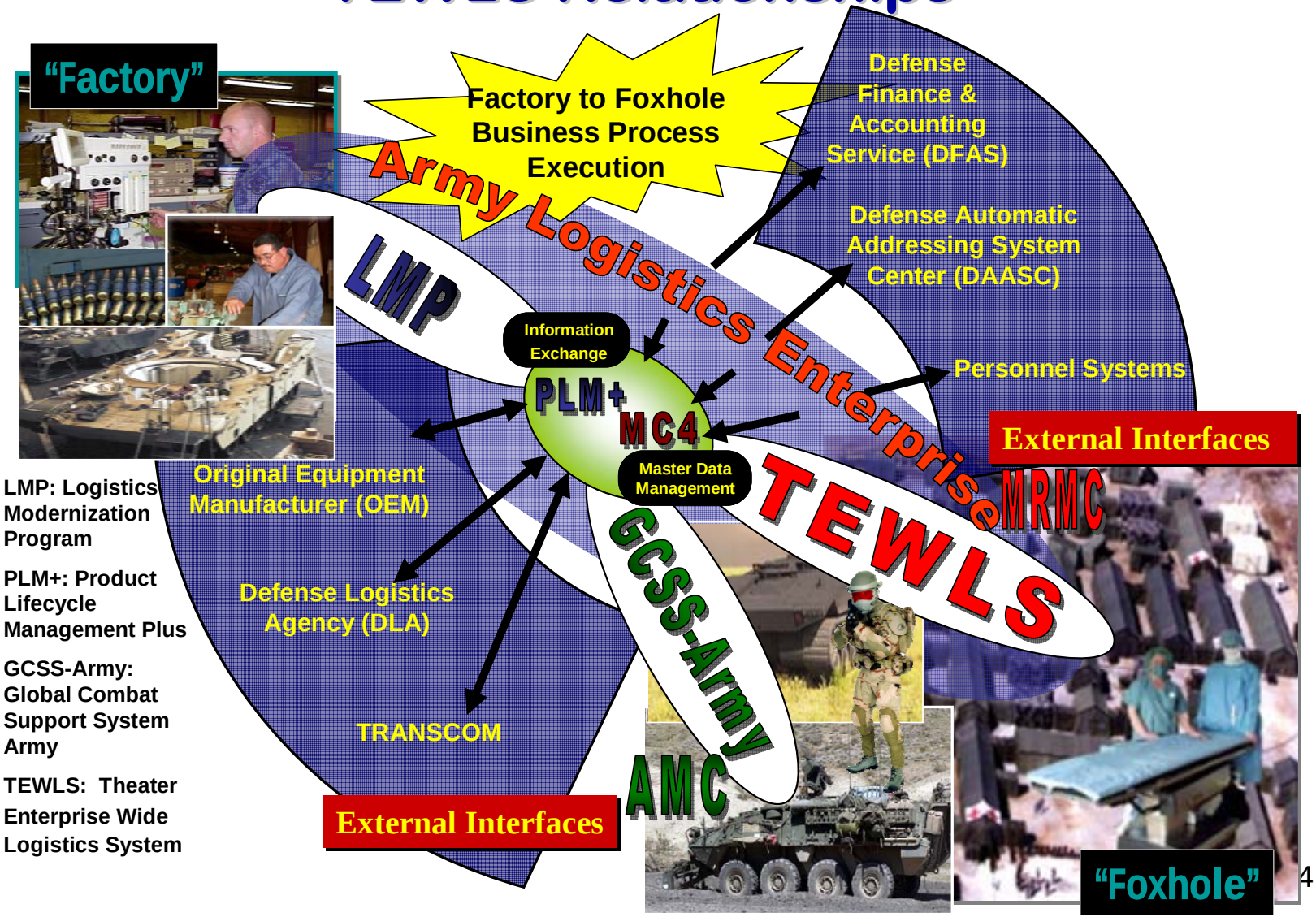
William H. Howell 301 619 4517 / william.howell@amedd.army.mil

52

Transition to NOW

53

TEWLS Relationships



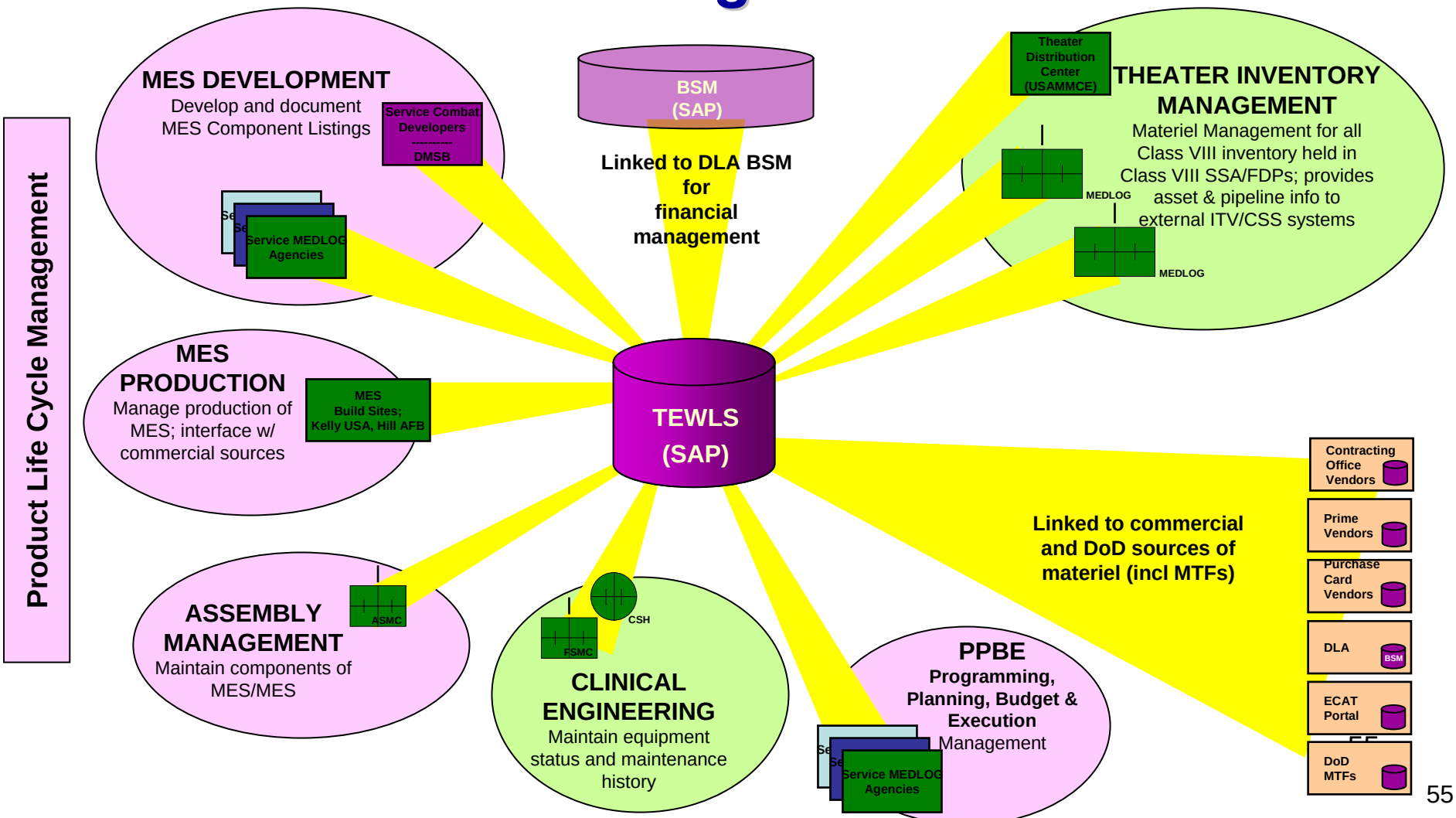
LMP: Logistics Modernization Program

PLM+: Product Lifecycle Management Plus

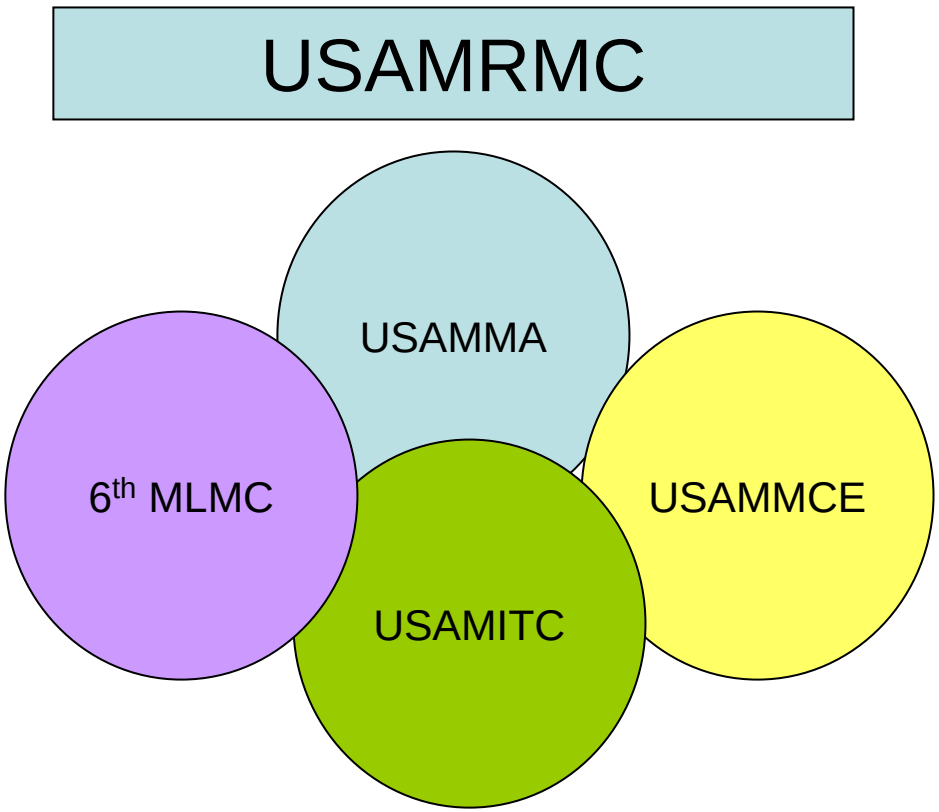
GCSS-Army: Global Combat Support System Army

TEWLS: Theater Enterprise Wide Logistics System

Common Data Environment for Joint Medical Logistics



TEWLS Management and Participation



Project Manager Change

- Expertise from each org necessary
- Command structures problemmatic
- Funding very difficult
- PM at HQs to oversee all actions

Actions

- PM from USAMMA
- Dep PM at USAMMCE and USAMITC

56

SAP Development Methodology

- ***Blueprinting and testing with actual users***
  - \- Hard to maintain workload
    Hard to maintain command and control

  + Absolutely positive for business process
    User buy-in from day one

- ***Integrated Test Process***
  - \- May enter into testing too soon
  + See usage early on to insure blueprint was good
    (early view and flexibility)

57

Contractor Experience

- ***IBM***
  - \+ Excellent management and team leadership skills
    Understands gov't and contracting procedures
  - \- Not as familiar with software
    More dependent upon organization for processes
- ***SAP***
  - \- Consulting new arm – lesser mgmt skills
  - \+ Understands software and brings best practices

58

Sustainment Methodology

- ***Contractor Support***
  - Avoid SAP from a cost basis
  - Third Party small business

- ***Build the Competency Center***
  - Need business, technical, application folks
  - Allows for users to have ready access
  - Enhances change proposals
  - Builds internal super users

QUESTIONS?

William H. Howell 301 619 4517 / william.howell@amedd.army.mil

60

Agenda

Trends in ERP Market	Mr. Larry Wright
Changing Technology	Mr. Larry Wright
SAP and Oracle Strategies	Dr. Ray Sommer
Success Stories & Lessons Learned	Ms. Bel Leong-Hong, Ms. Susan Carter
Break	20 min
Success Stories & Lessons Learned	Mr. William Howell
Success Stories & Lesson Learned	Ms. Sue Schreitmeuller
DoD and Army ERP Implementations	Mr. Lee Harvey
Wrap up & Q&A	Mr. Chip Raymond

Enterprise Solutions
Success Stories and Lessons Learned

Success Stories and Lessons Learned
Guest Speaker: Sue Schreitmeuller
Logistics Modernization Program

Logistics Modernization Program
LMP Data Migration "Lessons Learned"

Susan Schreitmueller

LMP Government Data Lead

856-988-4583

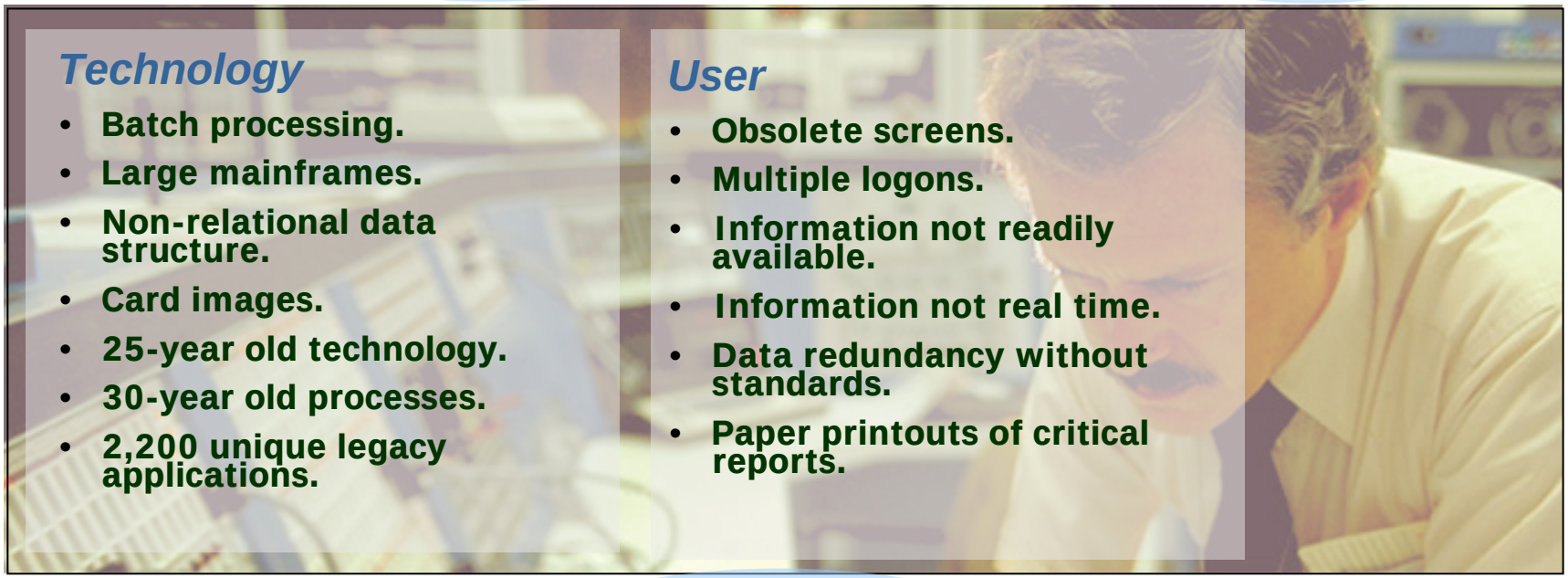
Agenda

- LMP Program Overview
- Data Migration Process
- Data Migration Roles
- Lessons Learned

LMP Program Overview
The Case For Action – Legacy Systems

Ineffective Communication of Supply Information

Manpower Intensive



Technology

- Batch processing.
- Large mainframes.
- Non-relational data structure.
- Card images.
- 25-year old technology.
- 30-year old processes.
- 2,200 unique legacy applications.

User

- Obsolete screens.
- Multiple logons.
- Information not readily available.
- Information not real time.
- Data redundancy without standards.
- Paper printouts of critical reports.

Disparate & Stovepipe Systems

Must Support Army Transformation

Lack of Business Process Reengineering

LMP Program Overview

Current AMC National Level Legacy Systems

Industrial Operations	Standard Depot System
National Inventory	Commodity Command Standard System

- 25-year-old technology
- 22M lines of Cobol code
- 2,500 interfaces
- 30-year-old processes
- Separate, loosely coupled local systems, databases, and processes

Contract Awarded to Team CSC in December 1999 — 12 Years $680M-$810M

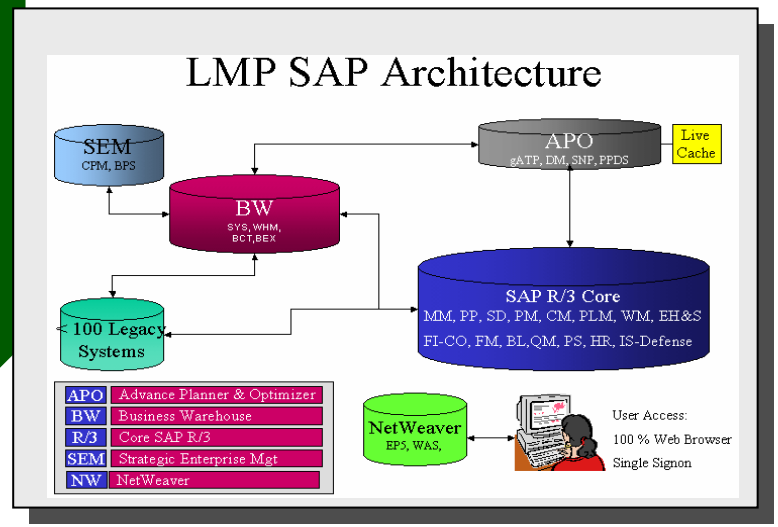
- Transfer of Services
- Modernization Services
- Sustainment Services – Legacy & Modernized
- Data Processing Modernized Services

The First Commercial Outsourcing Contract in the DoD and the Largest SAP Implementation in the World – Modernization in a Time of War

LMP Program Approach

What is LMP?

- **Outsourcing of maintenance and logistics IT support function to the private sector, CSC**
- **Migration from a disjointed system architecture to a single homogeneous ERP architecture**
- **Hosted SAP solution owned by CSC**
- **Transformation of the Army's logistics through leveraging best commercial business practices**



What is CSC's Role?

- As prime contractor, CSC is the systems integrator, applications service provider and full partner with AMC in the transformation and governance of LMP.
- CSC operates the current legacy Army logistics systems and will replace them over the life of the contract with completely modernized equivalents.
- CSC owns 60,000+ SAP licenses, the LMP solution, integration knowledge, and operates the solution on CSC hardware and infrastructure.

AMC Scope and Complexity

Suppliers

- OEMs
- DLA
- Services
- Army Depots
- Plants
- Arsenals

50,000 Vendors

AMC Operations
Inventory and Repair Depot

149 Fixed Locations

>1,000 Dynamic Locations

59 CONUS

38 Countries

49,000 Civilians

1,500 Military

6,000,000 **Items**

$40B Goods/Services

Customers and End Consumers

- Air Force
- Marines
- Army
- Navy
- DLA
- Other Govt.

Installation and Direct Support

Unit Support (Warfighters)

1,000,000 Customers

General Electric

- Repairable product supply chain
- 100 countries
- Cost of goods sold—$38B annually

Wal-Mart

- Consumable product supply chain
- 1,300 stores in nine countries
- 100,000 items

Analogous to a large multinational conglomerate, multiple businesses (Commands), diverse product portfolios, multiple complex supply chains — with added challenge of customer (Warfighter) readiness for survival.

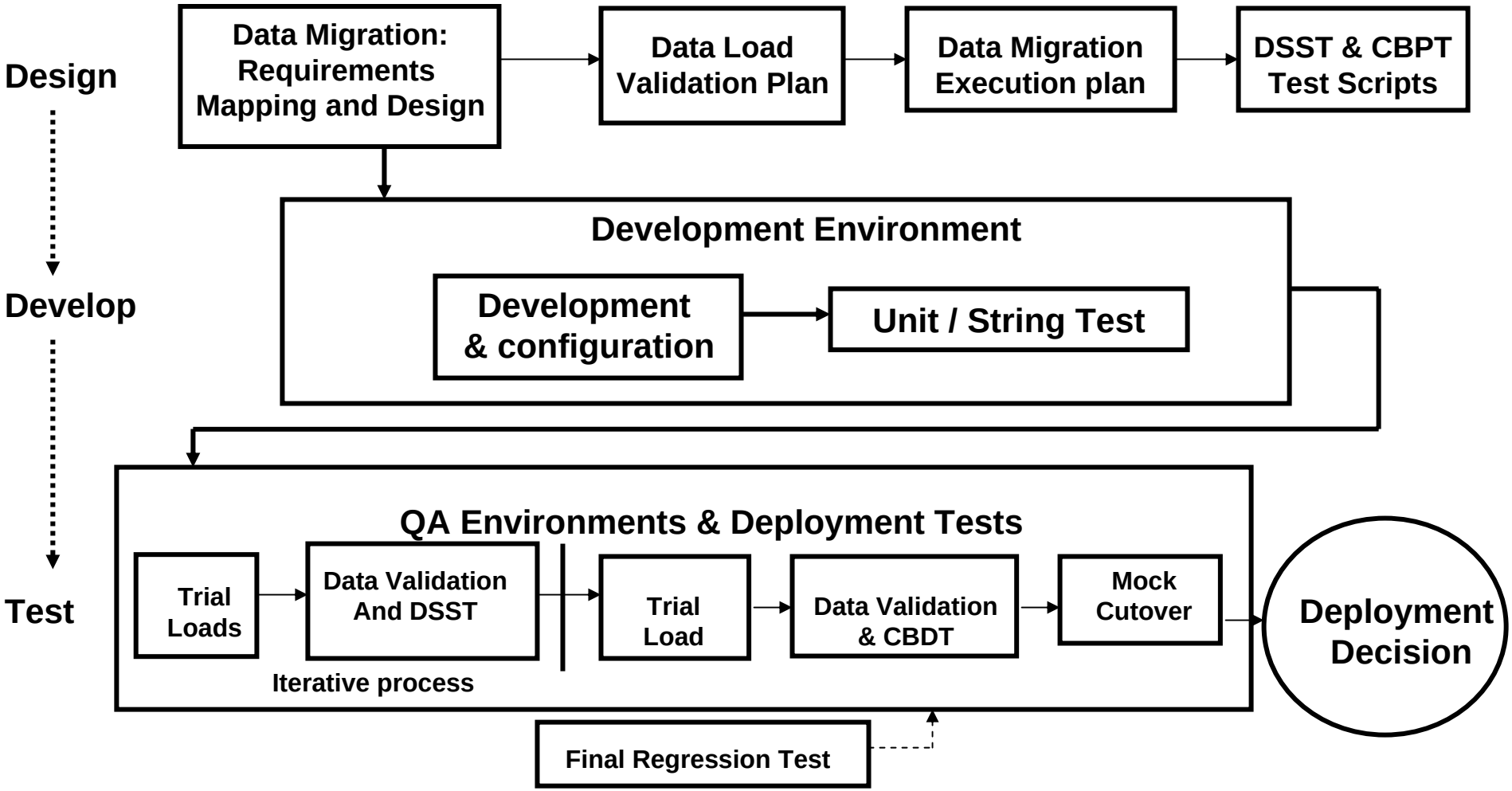
LMP Go Live June 2003

- Initial Data load from Legacy system.
  - 10 Million records loaded into R/3.
  - 20 Million records loaded into APO.
  - 215 Million records loaded into BW.
- July 4 Processed 7 day backlog in less than 10 hours of operations (190,000 transactions).
- Processed 1 Millionth Interface Document on July 7th.
- 156,000 labor hours input in first 4 days.

LMP Operational Statistics (thru Sep 2005)

- Inventory value - $4.5 billion.
- Vendor payments to date - $5.5 billion.
- Total obligations to date - $6.98 billion.
- Customer sales to date - $5.1 billion.
- Processed additional 33 million interface documents.
- Processed 67,697 new material masters.
- Processed 21.5 million material master changes.
- Processed 4.5 million Army requisitions (sales orders, stock transport orders, SSF, disposals, images).
- Processed 358,000 returns.
- Processed over 2 million MROs (deliveries).
- Processed 979,747 invoices (billing documents).
- Processed 368,000 invoices credits/cancellations.

Data Migration Process



LMP Data Team Roles

- Data Object Owner
- Data Czar
- Data Subject Matter Expert (SME)
- CSC Data Migration Analyst (DMA)
- CSC ST. Louis/Government LSSO
- CSC Chambersburg/Government ILSO
- Solutions Development Team

4 Levels of Data Readiness

Level 1

Legacy System Hygiene

Level 2

SAP/LMP Individual Data Element Cleansing

Level 3

SAP/LMP Data Object Integration Points

Level 4

Data-Specific, Scenario Testing

Data readiness team must have detailed knowledge of LMP/SAP data migration strategy and business processes

Level 1 – Legacy System Hygiene

- **1A - Routine legacy clean-up actions based on functional SME knowledge and available tools**
  - **Work standard CCSS/SDS error reports, exception lists, and "out-of-balance" condition reports**
  - **Execute existing scans and reconciliation programs**
- **1B - Targeted data element clean-up based on meta-data repository (MDR) mappings and business rules**
  - **Understand the source data files and elements to be migrated**
  - **Develop additional scans/report to emulate migration business rules and key edits and validations**

Level 2 – SAP/LMP Individual Data Element Cleansing

- **Identification of data cleansing requirements based on execution of specific data object load programs**
  - **Pre-processor programs and load programs will identify data elements that do not meet SAP/LMP requirements**
    - **Errors report, spreadsheets, log files, etc.**
  - **Specific errors will be provided to the Data Object Owner and the appropriate "community of interest"**
    - **Data Czars, Process Owners, Subject matter experts**
    - **Site points of contact, LMP PD data representatives**
- **The key to this process is the understanding the universe of data, the critical data elements, and specific edits and validations being executed**

Level 3 – SAP/LMP Data Object Integration Points

- **Identification of cross-functional data object migration requirements**
  - **Dependencies - Many data objects require valid migrated data from one or more other data objects**
    - **Sales orders require valid materials and customers**
    - **Purchase orders require valid materials and vendors**
    - **R-BOMs require valid materials for every item on the R-BOM**
    - **Production order require valid routings, BOMs, and work breakdown structures**
  - **Reconciliation – Quantities and funding amounts must be consistent between logistics, financials, and acquisition**
    - **Open legacy PO qtys/dollars should match open "due-ins"**
    - **Open legacy projects should be reconciled for labor, materials, and other indirect costs**
- **Execution of load programs will identify rejects/errors related to data object integration points**

Level 4 – Data-Specific Scenario Testing

- **End-to-end testing of SAP/LMP business processes <u>using migrated data</u>**
  - **Focus of this effort should be geared toward significant risk areas and/or deployment deltas**
    - **Limit time spent on processes that already work**
    - **Review lessons learned and known differences in deployment site data or processes**
  - **Identify critical process areas for testing (individual and integrated scenarios)**
    - **Sales Orders (legacy requisition processing)**
    - **Purchase requisitions and orders**
    - **Production orders and work breakdown structures**
    - **Integration with AP/AR and GLA Balances**
    - **MRP and SCP execution**

Critical Data Objects (Based on Business Process)

- **All data objects do not require the same level of cleansing effort**
- **Critical = (1) vital to AMC's core business objective of delivering material support to the war-fighter, and (2) areas with significant post go-live clean-up and lessons learned**
  - **Master Data:**
    - **Material Master**
    - **Bills of Material (R-BOM and P-BOM)**
    - **Routings**
  - **Transactional Data:**
    - **Inventory Balances – IM/WM**
    - **Purchase Requisitions**
    - **Purchase Orders**
    - **Work Breakdown Structures**
    - **Production Orders**
    - **Accounts Payable**
    - **Accounts Receivable**
    - **Sales Orders**

Majority of Data Clean-up Efforts Should Be Focused in These Areas

Data Readiness Lessons Learned

- Data validation is more than just verifying that the legacy data migrated properly. It is validating that the data will work effectively in the modernized business solution
- Effective data validation requires functional knowledge of modernized business processes
- Data Validation must include functional tests against migrated data which demonstrate that the data will support the modernized business processes
- Data migration timeline must allow sufficient time for data validation testing
- It is important to retain and maintain a consistent data validation team so that by the time you get to cutover, the final validation can be conducted quickly and efficiently

Bottom Line: Pay Me Now or Pay Me Twice Later

Most Important Lessons Learned

- People are the key to a successful ERP implementation
  - Users must be active participants in the process
  - Integrated ERP Development requires integrated team participants
- Deployed Sites must be willing to adapt to new business processes
- Effective Change Management is key to success

Data Bottom Line: There Is No Magic Bullet

- **Data Quality is a Journey, not a Destination**
  - **The pursuit of data accuracy must be an ongoing process of measurement, root cause analysis, and corrective action**
- **There is no technology "magic bullet" for achieving ERP data accuracy**
  - **People / process Vs. technology issue**
    - **Teams must focus on understanding and resolving the organizational and process issues that are resulting in data inaccuracies**

Agenda

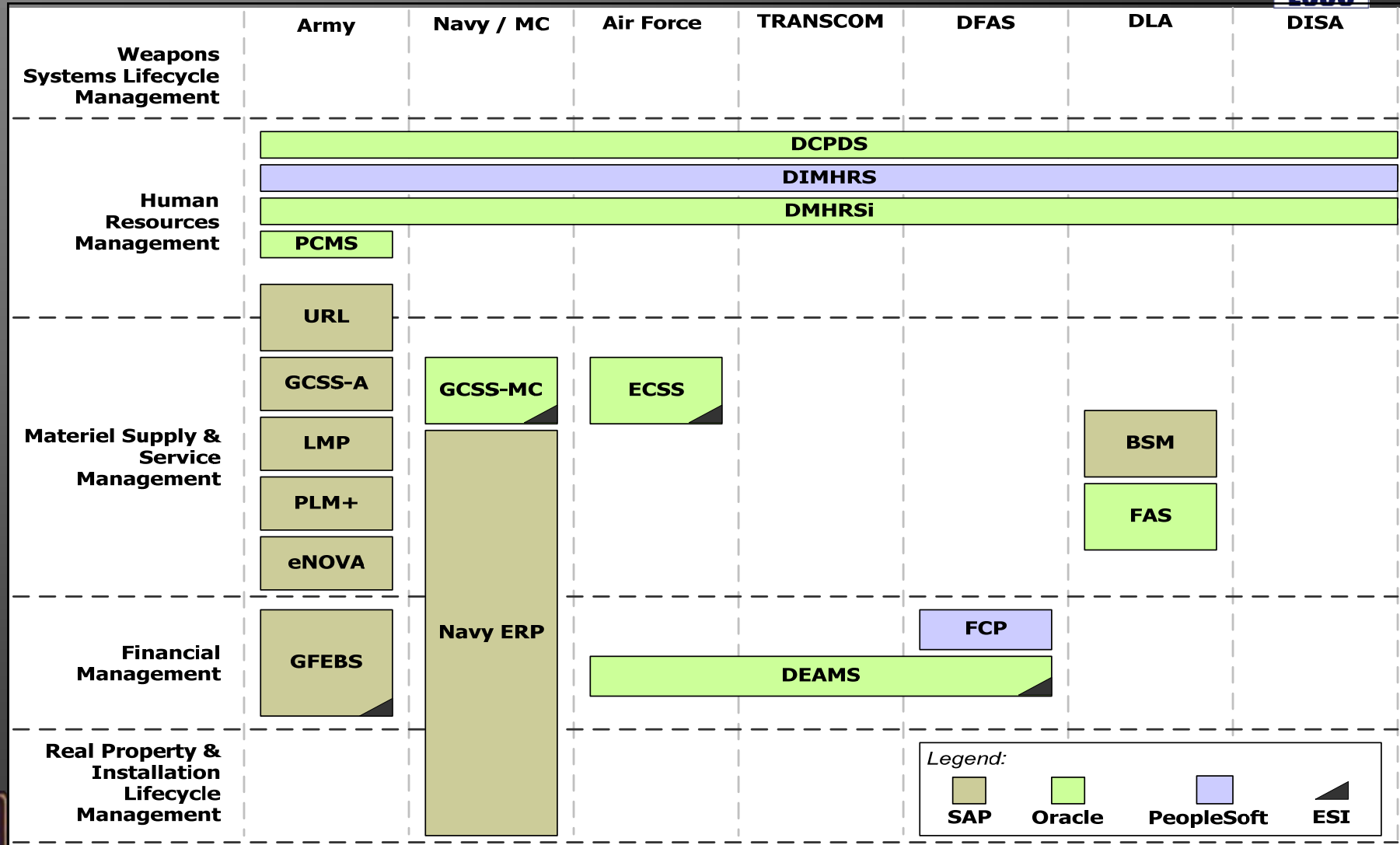
Trends in ERP Market	Mr. Larry Wright
Changing Technology	Mr. Larry Wright
SAP and Oracle Strategies	Dr. Ray Sommer
Success Stories & Lessons Learned	Ms. Bel Leong-Hong, Ms. Susan Carter
Break	20 min
Success Stories & Lessons Learned	Mr. William Howell
Success Stories & Lesson Learned	Ms. Sue Schreitmeuller
DoD and Army ERP Implementations	Mr. Lee Harvey
Wrap up & Q&A	Mr. Chip Raymond

Enterprise Solutions
Success Stories and Lessons Learned

DoD and Army ERP Implementations

Guest Speaker – Lee Harvey, Deputy PEO EIS

DOD / Army ERP Programs



Agenda

Trends in ERP Market	Mr. Larry Wright
Changing Technology	Mr. Larry Wright
SAP and Oracle Strategies	Dr. Ray Sommer
Success Stories & Lessons Learned	Ms. Bel Leong-Hong, Ms. Susan Carter
Break	20 min
Success Stories & Lessons Learned	Mr. William Howell
Success Stories & Lesson Learned	Ms. Sue Schreitmeuller
DoD and Army ERP Implementations	Mr. Lee Harvey
Wrap up & Q&A	Mr. Chip Raymond

Enterprise Solutions
Success Stories and Lessons Learned

Wrap Up / Q&A

Mr. Chip Raymond - SEC - Belvoir

Learning Objectives

- Understand the current state and trends of the ERP Market
- Understand changing technology for Enterprise Solutions
  - Service-Oriented Architecture
  - Oracle Fusion
  - SAP NetWeaver
- Provide Success Stories and Lessons Learned for Public and Private Sector ERP implementations
- Open discussion of DoD and Army strategies for ERP implementations